In course of preparation, the Fourth Edition of

INDIAN RAILWAYS,

AS CONNECTED WITH THE POWER AND STABILITY OF THE BRITISH EMPIRE IN THE EAST, THE DEVELOPMENT OF ITS RESOURCES, AND THE CIVILIZATION OF ITS PEOPLE.

BY AN OLD INDIAN POSTMASTER.

"ALLEN'S INDIAN MAIL," *August 13th*, 1846.

"In regard to the great line to connect the seat of government with the extreme north-west, the author's opinions are peculiar."

The "INDIAN NEWS," *February 22nd*, 1848.

"The best testimony of the soundness of the 'Old Postmaster's' views is, that, in the settlement of Indian Railways, as far as it has recently taken place, not a few of his opinions have been followed by those in authority."

"THE TIMES," *19th November*, 1851.

"The line (in Bengal) seems to have been adopted, which was originally recommended by Mr. W. P. Andrew."

The "MORNING CHRONICLE," *November 20th*, 1851.

"By recent accounts from India, we observe that the Howrah terminus, indicated by Mr. Andrew to save bridging the Hooghly, had been adopted."

The "OBSERVER," *November 23rd*, 1851. *Indian Railways.*

"It is not a little remarkable, on reviewing the past and present position of Indian railways, to perceive that the views of a private individual have prevailed against, and finally overthrown, the plans of the Indian Railway Commission

"The Government and people of India are therefore indebted to the 'Old Indian Postmaster,' who has thus saved them from prosecuting a design which would have led to disastrous and humiliating results."

"THE ECONOMIST," *December 13th*, 1851.

"We see with some satisfaction, that the views propounded as to forming railways in India, by Mr. W. P. Andrew, under the cognomen of an 'Old Indian Postmaster,' and which were long ago recommended in our journal, find favour in India, and are likely to be adopted."

The "BRITANNIA," *December 13th*, 1851.

"It is announced, we see, by the 'Friend of India,' received by the last mail, 'That the Court of Directors had decided for the adoption of the line proposed by Major Kennedy from the collieries to Rajmahal, and thence up the valley of the Ganges,' which is exactly *the* scheme originally propounded and advocated by the 'Old Indian Postmaster,' (Mr. W. P. Andrew) in 1846, some two or three years before Major Kennedy went to India, and to whom exclusively the merit is due of having pointed out the erroneous views of the East Indian Railway Company, and adopted by the India Government Railway Commission. Had the authorities acted upon Mr. Andrew's views, a large and useless expenditure of time and money would have been saved; and it is admitted on all hands that this gentleman 'has saved railway enterprise in India from a great and lamentable failure.'"

The "MORNING HERALD," *September 14th*. 1852.

"Mr. Andrew is well known as the author of a valuable work published some years since by Mr. Pelham Richardson, under the *nom de guerre* of an 'Old Indian Postmaster,' by which public and official notice was mainly, if not first, directed to the great subject of railway communications in India."

In the Press.—Second Edition, greatly enlarged,

THE SCINDE RAILWAY

AND ITS RELATIONS TO

THE EUPHRATES VALLEY,

AND

OTHER ROUTES TO INDIA.

WITH ILLUSTRATIVE MAPS, STATISTICAL TABLES, ETC.

FROM OFFICIAL SOURCES.

By W. P. ANDREW, F.R.G.S.,

CHAIRMAN OF THE SCINDE RAILWAY AND EUPHRATES VALLEY RAILWAY COMPANIES,

Author of "Indian Railways and their probable Results, by an Old Indian Postmaster," "Railways in Bengal," "Is India to have Railways?" "Memoir on the Euphrates Valley Route to India," &c.

"Heretofore, and until very recently, every recruit that joined his corps from England—every invalid that was sent back shattered to his home, was obliged to travel the long, slow, weary track to Calcutta, however distant the station at which he was placed. Within the last two years, the establishment of steam communication regularly on the Indus has enabled the Government greatly to lessen the evil. This dispatch of recruits by Bombay to Kurrachee for that large portion of the Bengal army that is stationed to the westward of the Jumna, and the conveyance of the invalids of the same portion of the army from Ferozepore to the sea, have been a vast improvement."—*Minute by the Governor-General of India*, 1853.

"In the meantime the channel of the Indus is becoming the great highway between Europe and the North-western provinces of our possessions. Troops arrive and depart from England by that route. Recruits are sent out, and invalids sent home, each year by its stream; thus avoiding the long and weary march which must otherwise be made by Calcutta. Great quantities of heavy stores follow the same course, and passengers in large numbers now by preference seek by it a point of departure at Bombay." —*Minute by the Marquis of Dalhousie*, 28*th Feb.*, 1856, *reviewing his administration in India.*

"Indeed these two essentials, viz., the Railroad and the Steamers, may be said with truth to be the crying wants of the Punjaub in the Department of Public Works.

"These provided, the commerce and produce of these territories will be turned to their due course, viz., the Indus and its feeders and to their natural outlet, viz., the Port of Kurrrachee.

"For the Railroad, the face of the Doab offers an unusual equality of surface.

"If carried out, they (the railway and steamers) would effect more for the development of the resources of these territories than any other work, or number of works, that could be devised."—*The Chief Commissioner of the Punjaub to the Government of India*, 1855.

"Our taking up a formidable position at Candahar will go far to deter even speculation on the chances of invasion.

"The cost of the plan offered for consideration, and the drain on the already encumbered resources of India, deserve reflection. Yet present expenditure is often real economy, of which the war we are now waging is a notable example. It seems to be a national vice to prefer the most lavish outlay in prospect to present moderate disbursement. Whatever tends to avert an attempt to wrest India from our hands, and prevent the enormous consequent expenditure, is economy."

"Russia may be said to have already announced that she is even now preparing for her next encounter with Great Britain. Her railways have no other end than to transport troops. She found that in the last struggle her weakness lay in the impossibility of collecting her forces at the proper moment on the distant points of her empire. This weakness she has intimated shall disappear. But we, too, will not remain idle. Our railways in India will advance as well as those of Russia. Established and prepared in Candahar, *with a railway running the whole length of the left bank of the Indus, we may await any attempt in calmness.* The Russian grenadier now knows his inferiority to the English soldier. The Cossack will find a match in the Hindoostanee horseman."—*Sir Justin Sheil.*

RUSSIA AND PERSIA.

"The greatest activity prevails along the banks of the Caspian Sea. Transports and steamers are incessantly conveying troops or stores between Astracan, Schondrakow, Bakinks and Astrabad; the steamers generally convey troops, as, for instance, the Taski and the Cuba lately conveyed 300 men to Schondrakow; while the transports convey *materiel* and provisions. Prince Bariatinski lately repaired to Tiflis, the seat of his government, from Astrachan to Fort Petrowski by water, and on this occasion inspected all the fortified places along the coast. Attached to his head-quarters and staff there is a special division entitled the "*Du-jour* Service of Marine," consisting of a vice-admiral and several naval officers, and having under its concentrated command the flotilla in the Caspian Sea, the cruisers on the east coast of the Black Sea, and the rowboat flotilla of the Cossacks of the Sea of Azoff. It must also not be lost sight of, that not long back there was a Governor-general appointed to Kutais, also under the supreme command of Bariatinski, who has likewise under him Chruleff's army of observation on the Turkish Caucasian frontier and the troops occupying the Caucasus under Bebutoff. This extended and, at the same time, concentrated command, vested in the hands of Prince Bariatinski, points very distinctly to preparations being made with reference to the present critical state of matters in and connected with Persia."—*Berlin Correspondent*, "*Times*," *3rd Dec.* 1856.

"While England, with much noise and ostentation, prepares an expedition against Persia, Russia, unostentatiously and noiselessly, is getting ready to come to the succour of the Shah. The Orenburg *corps d'armee* has been considerably reinforced. It is commanded by Aide-de-Camp-General Peroffski. The outposts of this corps extend to the very limits of the country of Turan, upon the rivers Oxus and Jaxartes; and the military flotilla of the Lake of Aral, placed under the orders of the same general, is brought by the above-mentioned rivers to the frontiers of India. On another side, great activity reigns upon the Caspian Sea and in the army of the Caucasus. Transport vessels, having troops and war *materiel* on board, pass incessantly between Astrakhan and the port of Bakou, situated in the province of Shirvan, bordering on the Caspian Sea, belonging to Russia, and at the frontier of Persia. The new Lieutenant-General of the Caucasian provinces, Prince Bariatinski, has received fuller powers than his predecessors. He has lately inspected, on its way to its destination, the flotilla of the Caspian Sea, which has been considerably increased and partly left at his disposal. This flotilla can easily take troops on board either of the corps of Orenburg or the army of the Caucasus, and take them to the relief of Persia, disembarking either at Astrabad or upon the neighbouring coast of Teheran. The corps which forms part of the army of the Caucasus, cantoned at Shirvan and Erivan, and commanded by General Khruleff, who distinguished himself in the Eastern war, can also succour Persia by land as well as by sea. Meanwhile the Russian Government neglects nothing in replacing the war *materiel* consumed during the late war, and continues to refill the exhausted magazines."—*The Warsaw journal, the* "*Czas*," *of the 30th November.*

MEMOIR

ON THE

EUPHRATES VALLEY ROUTE

TO INDIA.

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And Maps.

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" It is a solecism of power to think to command the end, and yet not to endure the means."—
BACON'S ESSAYS OF EMPIRE.

LONDON:
WM. H. ALLEN & CO., 7, LEADENHALL STREET.

1857.

LONDON:
W. LEWIS AND SON, PRINTERS, 21, FINCH LANE, CORNHILL.

TO

THE RIGHT HONOURABLE

The Earl of Clarendon, K.G., G.C.B.,

&c., &c., &c.

THIS VOLUME

IS RESPECTFULLY DEDICATED.

PREFACE.

The substance of the following pages was originally circulated in the form of a memorandum. After having been somewhat extended, it was published with other papers in a volume entitled "The Scinde Railway and its Relations to the Euphrates Valley and other Routes to India."

More detailed information is now afforded, as it is believed to be *essential*, not only to the vital interests of this country in the East, and the well-being of Turkey, but to the peace and progress of the world, to establish, with as little delay as possible, steam and telegraphic communication, *viâ* the Euphrates, between England and India.

The countries on the route to be traversed are the most ancient and most interesting in the world. The greatest and most glorious nations of antiquity arose, flourished and were overthrown on the vast and fertile plains of the Euphrates and Tigris—the theatre of great events, shrouded in the dust of ages, or dimly discerned through the long vista of many centuries.

But this volume addresses itself to the present and the future, and not to the past, to indicate to the

statesman the political power, to the philanthropist the enlightenment, and to the merchant the profit, that would of necessity accrue from re-establishing this highway of forgotten empires and ancient commerce.

"All scholars, and nearly all mankind, must be interested in the development of the Euphratean territories. All the Scriptural commentators place the garden of Eden somewhere on the Euphrates. The second cradle of the human family was upon that river, or its tributary, the Tigris. The first city of the new earth was built upon its banks. The tower of pride, erected by the post-diluvian population, cast a shadow over its waters. It intersected the great capital of the Chaldean empire. With Babylon, the names of Nebuchadnezzar and Balshazzar—of Daniel and Darius, of Cyrus and Alexander, are for ever associated. The grand prophet of the captivity, and the energetic Apostle of the new era, had their dwelling for a season within its walls. Ere even a brick was made upon the Nile, Nineveh and Babylon must have had busy populations. Twice in the world's history mankind commenced the race of civilisation on the Mesopotamian rivers. Twice they diverged from their banks to the east, the west, and the north. Arts and sciences made their early and weak steps upon their shores. Very early in history we know that Babylon was a great manufacturing city, famed for the costly

fabric of its looms. At a more recent date the Chaldean kings made it a gorgeous metropolis, the fairest and the richest then on earth."

"Alexander of Macedon made it the port of the Indian Ocean, and of the Persian Gulf. He proposed to render it the central metropolis of his empire."

"Not only the cities or their ruins, and the traditions of Mesopotamia, are ultra-classical and interesting, but also the land is full of hidden riches. The now deserted plains were fields and gardens. The soil teemed with vegetation. The fruits of temperate and tropical climes grew there in luscious abundance. The arid sands need only again to be irrigated by the abounding waters pouring down, ever cold and plentiful, from Ararat, to become joyous with corn, and wine, and oil. It may even more affect our interests to know that many now wasted acres, save when in early spring they are sweet wildernesses of flowers, may be covered with cotton, and tend to the employment of the many-millioned spindles of our land.

"Every-way, commercially, historically and politically, the Euphrates Valley route is a grand scheme, that must affect immediately the commerce, and, in some measure, the destinies of our race; and that depends not for success upon a through traffic, but holds within its own confines, the elements of a great prosperity."

A railway of 800 miles in length, from the Mediterranean Sea to the Persian Gulf, would throw open the portals of the East to the commerce of the world, bringing in its train the arts, the sciences and civilisation of the West. The European and Indian systems of telegraph, united in one magic circle, would establish a real and practical bond of sympathy and identity of interests between this country and her most valuable and magnificent dependency — place in the hands of Government over 100,000,000 of our distant fellow subjects a power of supervision and control hitherto unknown, and give at the same time to the ship-owner and merchant a means of imparting and receiving information of inestimable value — to dissevered families a bond which will at once re-unite them — to the inhabitants of two empires widely apart a mode of intercommunication which would enable them to meet, as it were, face to face. In a word, the telegraph between England and India will be at once the pledge and the instrument of good and vigorous Government, and of moral and material progress.

To accomplish these things is the mission of England. She will promote thereby the freedom, the enlightenment and the peace of the world, and receive in return, by drawing closer to the centre of her power, the moral and material support of a subject empire.

The quiet possession of British India would be secured. The advancing standards of the barbarian Colossus who would overshadow the world would recoil before those emblems of progress and power, the electric wire and the steam engine, and his ominous tread be restrained behind the icy barrier of the Caucasus.*

* A letter from St. Petersburgh of November 15, published by the *Havas Correspondence*, says :—"In a report addressed to the military chancery by Prince Bariatzinsky, the commander-in-chief of the provinces of the Caucasus, most favourable accounts are given of the fortified towns and establishments on the coast of the Caspian Sea. Immense quantities of military stores of all kinds have been, during the last few months, sent from Astrakan to Derbend by the Volga, and this immense *matériel* may be turned to account, when time shall serve, by the *corps d'armée*, which, as it is thought, is destined to succour the Shah of Persia, our ally, in the probable case of his territory being invaded by an English expeditionary army. Russia, whatever may happen, will not be taken by surprise in those distant countries. It is known that General Churlew, one of the most intrepid defenders of Sebastopol, has been appointed by the Emperor commander of the *corps d'armée*, écheloned between Baka and Erivan, in the immediate neighbourhood of the Persian frontier. Many people at St. Petersburgh think that this fiery general, with all his forces, may very likely get to Herat before the English, who are expected to disembark at Bushir, shall be in line of battle. The opinion gains ground in military circles, that if the English Government should really carry its plan into execution, events will compel us to interfere with all the power which, thanks to the activity of our generals, we can dispose of in Asia. However, it will be scarcely possible for us to prevent the English from effecting a landing upon the two principal islands of the Persian Gulf, nor from installing themselves in the town of Bushir. They will annex them to their possessions in India, in the same manner and under the same pretexts as they did in the case of Aden, in the Red Sea."

Having had occasion to communicate with several departments of the Government, with the view to establish, by steam and telegraph, a closer connection between the East and the West, I desire to express my grateful sense of the facilities which have been uniformly afforded me in obtaining information.

My best acknowledgements are also due to many distinguished persons for valuable advice and assistance, and more particularly to Major-General Chesney, Captain Lynch, C.B., I.N., and Mr. W. Ainsworth, the geologist and geographer. To the last-mentioned gentleman I am under especial obligation.

I have also to thank Captains Charlewood, R.N., and C. D. Campbell, I.N., for practical suggestions on the navigation of the Euphrates by steam-vessels derived from personal knowledge of "the Great River."

To Mr. Lynch, of Bagdad, and Mr. Kennedy, of Aleppo, I am greatly indebted for much valuable information connected with the trade and commerce of Syria and Mesopotamia.

LONDON: *January*, 1857.

CONTENTS.

APPENDIX.

NOTE.

The Chairman of the Euphrates Valley Railway Company has received through the Earl of Clarendon a telegraphic despatch, dated September 27th, to the effect that it is expected that the Sublime Porte will guarantee 6 per cent. on a capital of £8,000,000 for the railway from the Mediterranean Sea to the Persian Gulf, for 99 years, upon certain conditions.

Having had through the courtesy of Lord Lyons, H.M's. Steam Ship Stromboli, Commander Burgess placed at their disposal, Major General Chesney, Sir John Macneill and the Engineering Staff of the Euphrates Valley Railway Company, embarked at Constantinople on the 27th Sept. for Syria, and having completed the preliminary survey of the first section of the proposed Railway, and made a general examination of the country between the Mediterranean and the Euphrates, the General returned to Constantinople to conclude the negotiations for the firman, while Sir John Macneill arrived in this country, leaving a portion of the engineering staff to make detailed surveys. Sir John reports that there is every facility for making a harbour in the vicinity of the ancient port of Seleucia, near the mouth of the Orontes, and that the country, *via* Antioch, Killes and Ailam, to Aleppo, presents no engineering difficulty, and that the railway may be constructed for £8,000 per mile. By making a *detour*, a rich settled country, dotted over with towns and villages, is accommodated, and branch lines will be unnecessary. A large traffic is in existence. According to the tollbooks, at a bridge on the Orontes, more than 1,200 laden camels and horses passed per diem. The charge for the conveyance of goods from Aleppo to Alexandretta was £8 per ton, but the usual rate is £3 15s. The price of oats at Aleppo in October, last was 18*s.* per quarter, and at Antioch, about forty miles' distance, 27*s.* per quarter. Besides being the most important portion of the railway, from the Mediterranean to the Persian Gulf, the link from Seleucia to Aleppo is in itself a complete work, having a port at one end and the chief emporium of Mesopotamia at the other, to which the traffic from India, Bagdad, &c., converges. That section of the line from the Mediterranean, to the Euphrates will be longer than was anticipated, being by the route as recommended by General Chesney and Sir John Macneill, about 150 miles in length. The Directors have received applications for shares from Aleppo; the applicants are of all denominations and creeds, and include the Pacha of Aleppo, other Turkish dignitaries, land-owners, and Armenian and Greek merchants.

"General Chesney has returned from Syria, and will remain here until the firman for the Euphrates Valley Railway is granted. Sir John Macneill is on his way to England. He went on board the Stromboli, which was placed at the disposal of the party by Lord Lyons, to Syra, and went from there by the Austrian steamer to Trieste.

"The expedition was a very successful one, and its results surpassed all expectations. The first care was to find a convenient situation for a harbour: this was found about a mile to the south of the mouth of the Orontes, in a creek which receives no streams, and is therefore not liable to get blocked up by deposits. With small expense this creek can be converted into a harbour as good as that of Kingstown. Four roads were tried from the sea to Aleppo, and at last a tolerably easy one was found. It follows, more or less, the Orontes, and the only expensive works anticipated are two small bridges across the Orontes, and a rather long cutting, where the line would leave the river. General Chesney did not expect that the railway, without great expense, could be brought nearer than eleven miles to Aleppo. The survey has diminished this distance to one mile; from Aleppo to the Euphrates it is a gentle slope, which will cause no difficulty whatever. The results of the whole survey are so favourable, that it is expected the line to the Euphrates can be constructed at about £6,000 per mile, which is a very low estimate.

"Besides these proofs of the facilities of construction, the expedition has brought back proofs that the line will pay by local traffic alone. The price of a ton now is £6 from Aleppo to the sea. The railway will be able to transport it from 18*s.* to 22*s.*, which will bring down a great number of goods which are now lost for want of transport.

"As regards the Arabs, as far as the Euphrates at any rate, there is nothing to fear. On the contrary, the people are greatly in favour of the railway, and none of the prejudices which were anticipated exist in reality."—*Constantinople Correspondent's Letter*, "*Times*," 21*st Nov.*, 1856.

MEMOIR

ON THE

EUPHRATES VALLEY ROUTE TO INDIA.

BY W. P. ANDREW, Esq.

A LEADING journal recently remarked, that "Turkey has been many years the object of British solicitude. We have, with all the earnestness of a free people, fought the battle of the Ottoman empire as an independent State, criticising at the same time the many abuses of its internal economy. We are now, from the nature of things, the true friends of the Sultan's authority. England alone of the four Powers which have busied themselves in Oriental affairs has no possession bordering on the Ottoman empire. She cannot be accused of wishing to wrest any province from its sway. Yet she is most deeply interested in the improvement and prosperity of these countries. Through them lies the highway to India and Australia, and their future railways, telegraphs, and steam navigation will bring the most valuable possessions of the British crown into close connexion with the mother country."

Of all the projects, political or commercial, relating to the East, which have been started since the peace, there is none fraught with more momentous consequences to the future of Turkey than the two kindred schemes for uniting the Mediterranean and Persian Gulf by a Railway and Electric Telegraph. Their importance to England and to India is now acknowledged; but to Turkey the consequences of executing two such schemes seem destined to be still more momentous.

The energy and ability of Mehemet Ali did less for Egypt than the fact that, the introduction of steam navigation rendered his country, once more one of the great high-

ways between India and Europe. Egypt would, under any circumstances, have been naturally rich and fertile; but as the channel of transit to India and China, the peace and good government of Egypt become a matter of necessity to all mercantile Europe and America.

A similar result must follow in the countries between the Mediterranean and Persian Gulf, by nature not less fertile than Egypt, but for ages so miserably governed as to have made them a burden rather than an element of strength to the Turkish empire.

To develope the resources of such provinces as the Pachalicks of Aleppo and Bagdad, to introduce railways and European capital and enterprise, would of themselves confer a vast boon on the Turkish Government, by converting a drain on its finances into an important source of revenue to its exchequer.

But by making then a second highway to India and China, and to our Australian colonies, the projects we are speaking of will do much more. They will identify the interests of Europe and America with the peace and prosperity of those provinces of Turkey, and will thus prove more effectual in bringing Turkey into her proper position as an important member of the great European family of nations, than could be effected by any amount of diplomacy, or by any number of protocols.

They will form a great additional safeguard to Turkey against any ambitious schemes, or grasping policy on the part of any one of her powerful neighbours or allies. From the date when the first mail or telegraphic message travels from the shores of the Mediterranean to the Persian Gulf, it will become impossible for any single nation to entertain any exclusive ideas of selfishly appropriating what will have become one of the great highways of the world. The days when any single consul could promote or retard intercourse

along the line will have passed away. Every thing which can materially affect the freedom and facility of transit, will have become of importance to the mercantile community of the whole civilized world; and, as the rightful and natural guardian of such a trust, the Turkish empire will find the best guarantee for its independence in the self-interest of every one who is concerned in commerce, at New York as well as at Liverpool, Trieste, or Marseilles—at Shanghai and Calcutta, as much as at Bagdad or Constantinople.

But it is not Turkey alone which will feel the beneficial results which are sure, sooner or later, to follow the execution of such projects. Adjoining Turkey is a kingdom once as rich and nearly as powerful, but which through ages of misrule has become little better than a theatre for the disputes of diplomatists. Save as a means through which England can thwart Russia, or Russia irritate and threaten our Eastern Empire, the existence of Persia has almost ceased to be a matter of consideration with European nations.

But this can no longer be the case where passenger steamers shall periodically traverse the Persian Gulf, and the electric cable be extended along its shores. The commercial intelligence and enterprise of Europe will then once more revisit its ancient haunts in the factories where Genoese and Venetians, Portuguese, Dutch, and English successively sought the custom of the "Grand Sophy of Persia," and his then wealthy subjects; European civilization will then insensibly pervade the Persian Empire by the same influences which are already at work in the ancient kingdom of the Mamelukes; and, as her interests become identified with ours, Persia will learn to take her place, as Turkey has already assumed hers, in the great federation of civilized nations.

The present crisis of affairs in Persia shows how important such a state of things would be to the interests of India and of England. Utterly devoid of any substantial power, and

secure in her remoteness, Persia ventures to put a slight on our ambassador, and attempts to purchase the support of Russia by disturbing our Affghan frontier. To bring this feeble and faithless power to her senses may require some palpable exhibition of our power in the shape of expensive expeditions, whose best result can only be an apology for an insult, or the retraction of an unfounded claim. No one can doubt for a moment but that our differences with Persia might have been settled months ago had the Euphrates Valley Railway and Electric Telegraph been in operation. Persia would then have seen that we possessed the means of landing, at a few weeks' notice, upon her coast, a force as large as we sent to the Crimea, and the leading nations of Europe would have felt that they possessed an interest in putting an end to a misunderstanding which they now doubtless regard as affecting none of their number save England and Russia. It is the want of a speedy means of communication by the Euphrates Valley route which allows this very paltry dispute to be prolonged through months and years, and threatens our Indian exchequer with a burden in comparison with which all the possible expenditure on both railway and telegraph may prove a very trifle.

" It is truly gratifying (says a recent and able writer) to find that the late war in the East promises, after all its miseries, to be followed by some good practical results. Turkey is no longer a country set apart from the rest of the civilized world; she is admitted into the fraternity of nations. Her Christian population has been secured equality with the Mussulman. A great future lies before her; and in no way can that future be so quickly made amenable, as by the opening of lines of communication to commerce, intercourse, and civilization—great thoroughfares which will bring the East and the West into contact, make India, China, and the populous regions of Central Asia almost a portion of the

European continent, and revive the great nations of antiquity from amid the ruins in which they lay slumbering in the glorious valleys of the Euphrates and the Tigris.

"It is natural that when such a magnificent field of enterprise, so long coveted and so long closed by the jealousies of Russia, should be at length opened, that there should be many schemes and projects advocated by different parties. France and Austria have both laid projects for opening a c ommunication between Europe and Central Asia,by Turkey in Europe and Turkey in Asia, before the sublime Porte.

"In this country, ever since the first exploration of the valley of the Euphrates by General Chesney, the advantages of such a route to railway or steam communication has not ceased to press itself upon all thoughtful and intelligent minds. Indian railways, which were brought to the notice of Lord Fitzgerald, the President of the Board of Control in 1842, seem, however, to have been the basis of legitimate projects of overland routes, as contradistinguished from mere visionary schemes.

"The first edition of Mr. W. P. Andrew's work, "Indian Railways, as connected with the power and stability of the British empire in the East, the development of its resources and the civilization of its people, with an analysis of the projects now claiming public confidence," appeared early in 1846. This was the first great step, which finally led to the project of establishing a communication between the railways of India and those of Europe. The line of Rajmahal, and by the valley of the Ganges, in Bengal, which was originally recommended by Mr. Andrew, was, it is true, for a time suspended by the Mirzapore direct project of Mr. R. M. Stephenson; but it, the Rajmahal line, was that which was ultimately adopted by the authorities, and Mr. R. M. Stephenson was ordered to carry it out. Mr. Andrew's energy was, however, only thrown thereby into a new and

more important channel, and he was enabled to carry out a favourite project of a Scinde railway, from whence has arisen the still more recent scheme of a connection between that railway, the valley of the Euphrates, and the Mediterranean.

"Not that there were any want of projectors at home. A Mr. William Pare, of the Seville Ironworks, in Dublin, elaborated a scheme of a Calais, Constantinople, and Calcutta Railway, in 1842, and this was afterwards, in 1845, prolonged to Pekin, under the designation of the "Atlas Railway. Mr. Alexander F. Campbell "proposed a railway from England to India" to the Honourable Board of Directors of the East India Company, in letters and maps of 6th September, 1843; 25th March, 1845; 25th April, 1845; and in 1851 Mr. James Wyld published a map with the railways laid down as proposed by Mr. Campbell, viz., from Ostend, *viâ* Vienna, Belgrade, Constantinople, across Asia Minor to Aleppo, and along the valley of the Euphrates, skirting the seaboard of Persia and Boolochistan to Kurrachee, and thence to Calcutta. In 1849 Mr. Wright advocated the opening of a railway line along the valley of the Euphrates, and his ideas were subsequently embodied in a small work, entitled "Christianity and Commerce, the natural results of the Geographical Progression of Railways," by John Wright, Esq.

"The late Dr. James Bowen Thomson, also published in 1851 the project of a railway from London to Calcutta, and had his plans delineated in a sketch at the 'Great Exhibition;'" and was so strongly impressed with the greatness of the objects contemplated by General Chesney's mission, that he spent many years in the East collecting data; and having obtained for the Euphrates route the favourable consideration of the Sublime Porte, her Majesty's Government, and the British Ambasador at Constantinople, died lately at that capital while pressing its adoption.

" Mr. R. M. Stephenson has only recently made public a similar project to that of Messrs. Pare, Campbell, Wright, and Thompson, although it appears he submitted an outline of his views previously to influential persons in 1850."

" In discussing schemes and projects of proposed railway communication, too much stress cannot be laid upon the important scientific and practical fact, that there are two classes of schemers or projectors, of widely different stamp and character. One class of persons examine first the physical characters of the country, its aspect, contour, and capabilities, the minute details of its configuration and geological structure, and then, availing themselves of the line of greatest facilities and greatest promise, come forward with a well digested plan, deserving as such both consideration and confidence.

" Such, pre-eminently, in the countries in question, were the surveys made by the expedition under General Chesney. Such were the surveys made by General Macleod, and Colonel W. N. Forbes, of the Rajmahal line, as advocated by W. P. Andrew, Esq., and as contradistinguished from the Calcutta and Mirzapore direct railway, projected by Mr. R. M. Stephenson.

" Such, also, were the surveys and explorations upon which were based the project of the Scinde Railway, the details of which will be found in a work recently put forth by W. P. Andrew, Esq., ' The Scinde Railway, and its relations to the Euphrates Valley, and other routes to India.' Such also were the professional surveys carried across the narrow tract of country that intervenes between the Red Sea and the Mediterranean, with the view both to inter-maritime and to railway communication. And such also, on a scale less entitled to consideration, but still of some merit in their own way, in relation to the countries in question, were the surveys effected by Captain W. Allen, R.N., in connection with a

projected communication between the Mediterranean, the Dead Sea, and the Red Sea; the barometric levellings and geological sections of Taurus, Asia Minor, Kurdistan, &c., by Mr. W. Ainsworth, the geologist to the Euphrates expedition; the details of a feasible line across Asia Minor, by the same geographer and geologist, laid before the British Association at its meeting at Belfast, in 1852, by General Chesney; and, lastly, of a similar description, were the barometric levellings and geognostic explorations, carried out by Ami Boué, between Belgrade and Constantinople, in 1838 and 1839. (*La Turquie de l'Europe, &c.*, 1840.)

"There is another class of projectors and schemers, who take up a map,—often exceedingly inperfect in all that relates to the physical configuration of a country, and especially so in regions that have been so recently explored by competent observers, as Asia Minor, Taurus, and Kurdistan—glance at the course of rivers and the direction of chains of mountains, as rudely and too often conjecturally delineated, and then pouncing upon a spot where sometimes an accidental omission of shading would appear to indicate a plain, or valley, or opening, they carry a narrow bit of ribband boldly across the greater portion of the map, turn it down into the imaginary gap, rejoice at having safely reached an open and comparatively level country, and proclaim a line of railway from Constantinople to Bussorah!

"It is so much the more cruel to treat Asiatic Turkey in this supercilious manner, as although traversed by high mountain chains, or by far spreading uplands, or cut up by deep watercourses, and furrowed by wooded vales and rocky and precipitous glens, still it has its natural lines of route, its great providential gaps, which have hence been from time immemorial the great highways of nations. Such, for example, is the gap in Taurus, at the Kulak Boghaz or Silician Gates, through which Cyrus and Alexander alike led their

forces, and where in modern times an Ibrahim Pasha erected his defences. Such is the natural gap at Haji Hamsah, through the Kush Tagh or Bird Mountains, near Osmanjik on the Halys, from time immemorial the line of the great road from Constantinople to Armenia and Persia. There are gaps in rugged limestone chains in Asiatic Turkey so narrow, of such hard material, and so long used for traffic, that the horses hoofs have worn a succession of deep holes. A remarkable instance of this kind presents itself at the pass of Armanus in Mount Belus, to the east of the Orontes, and between it and the district of Rayah and Edlip. It is no vain imagination to believe that these horse steps have been followed by Macedonian and Crusader alike. It is well worthy of being treasured up as a valuable fact that in countries so circumstanced as Asia Minor, Syria, Palestine, and other regions around have long been, the traveller and the geographer will seldom be wrong in his search for available routes, if he abides by those which have been in use from all antiquity. It is always the difficulties of the soil, or obstacles of some description or other, not seen at starting, and still less to be discovered by the examination of a map, that drive travellers for centuries across the same ferry, along the same ledge of rock, or through the same mountain opening.

"To attempt, therefore, to establish a claim of priority upon the mere grounds of suggestion, unaccompanied by any local or topographical evidences, which can alone give to such a suggestion claims to consideration, is manifestly the height of absurdity; if priority is to be determined by the mere fact of a hap-hazard suggestion, it would be in the power of any one to project a railway from Boulogne to Pekin, from New York to Patagonia, or from Algiers to the Cape of Good Hope, and for ever occupy the ground on the plea of priority. It is obvious that if there is any claim to precedence in the

matter at all, it lies with the person or persons who first establish the feasibility of a project, and not with those who merely devise or imagine such. Were it otherwise, the great poet of England might establish a claim to priority in the most comprehensive scheme of railway and electric telegraph communication that has been as yet propounded.

'I'll put a girdle round the earth in forty minutes.'"

As an example of hap-hazard suggestion, a certain projector who having "manifestly looked upon the map, he has seen that there is a river Sakariah flowing down beyond Ismid, from the interior to the Euxine, and he has opined that there must therefore be a valley opening from the lower country to the high central uplands of Asia Minor. It happens, however, unfortunately for this theory, that although the valley of Sakariah is readily enough reached by the great Constantinopolitan road from Ismid by Lake Sabanjah, that it is closed up to the southward by a long line of formidable precipices, and indeed throughout the whole distance that it has to force its way through the Ascanian Olympus. This is just one of those difficulties which are spurned by the genius which 'would not consider a tunnel through Olympus a wonderful undertaking.' But what confidence would shareholders have in a projector who, at the very outset, like a Quixote anxious to wrestle with difficulties, grapples with the formidable passes of the Sangarius, when the ancient and comparatively open Constantinopolitan road to Boli lies in front of him. They would not trust their doubloons to the Bythinian hero, rival of he of La Mancha.

"But, suppose the rugged limestone cliffs of the Olympus turned, tunnelled, or overcome, and the town of Lefkeh reached, there is southward of that place another range of precipitous limestone hills through which the river forces its way by an impassable glen; and beyond that again, and between it and the plain of Eski-Shehr, is the Tomanji Tagh,

or Mount Tmolus, a very difficult, wooded, and mountainous district, which a person bent upon any practical object would carefully avoid, especially as there are openings to the interior uplands of Asia Minor at other points."

"Of the surveys made by her Majesty's Government and the Honourable the East India Company, of the rivers Euphrates and Tigris and their tributaries, as well as of their adjoining territories, he (a certain projector) makes no mention whatsoever. They are obviously too insignificant to be noticed in so magnificent and so visionary a scheme.

"It is to be hoped that some day, when the line of railway from Belgrade to Constantinople comes into action, and has been united with the railways of Hungary; and the line of the valley of the Euphrates has also been brought into operation, that a connecting link will be established between the two across Asia Minor, by such a feasible route as we could readily give the details of, and which would include the plains of Silicia Campestris, the pass of Kulak Boghaz, the plain of Nigdeh, the valley of the Halys, and the great Constantinopolitan road, by Hadji Hamsa, Boli, and Ismid, as originally laid before the British Association for the Advancement of Science, and not by such an impracticable and visionary line as that proposed by Mr. R. M. Stephenson. It is also to be hoped that some day Sir Justin Sheil's plan may be put into execution, and that the maritime line which would bring the valley of the Euphrates into connection with that of the Indus, or the Euphrates and Tigris railway into conjunction with the Scinde railway, may be carried out: but in the meantime it is obvious that the Persian Gulf presents such facilities for steam navigation, can indeed be navigated by steamers of such small dimensions, that an almost daily communication could be established without incurring overwhelming expenses; and that such communication, in connection with the route by the

valley of the Euphrates, is infinitely preferable to a line exposed to such strong objections on the score of expenses, difficulties, and dangers as those which are urged by Sir Justin Sheil and Colonel Hennel against the proposed line of Mekran. It would really be a new feature, at least in the old world, to introduce in the construction of lines of railway, first, the act of seizing upon the country, with guns and soldiers, and then the keeping it, 'as it were within the sound of our own cannon.'"*

From the physical obstructions to be surmounted and the unsettled state of the inhabitants a railway through Beloochistan to the Indus may for the present be placed in the same category as a tunnel between England and France.†

The overland route, promoted by the late Lieutenant

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* The Euphrates Valley Route to India; by "A Traveller," dedicated to W. P. Andrew, Esq., Chairman of the Euphrates and Scinde Railway Companies. Edward Stanford, Charing-cross. 1856.

† PROJECTED RAILWAY TUNNEL BETWEEN ENGLAND AND FRANCE.—The construction of a tunnel for a railway beneath the bed of the Straits of Dover, with a view to unite the shores of England with those of France, and then with the entire European and Asiatic continents, is occupying much public attention, from the several projected plans which have recently been promulgated. Mr. Wm. Austin, many years in Messrs. Peto, Betts, and Brassy's establishment, has, since 1853, matured a plan which has been highly approved of by first-rate engineering talent. The plan proposed by him has for its object the accomplishment of a really permanent railway and enduring structure, extending from shore to shore, a distance of 22 miles, and connected at each end with the already constructed and future lines of railroad. It is intended to have a triple way of three arches, oval in form, and securely locked together by inseparable and indestructible masonry, constructed of approved imperishable material, impervious to moisture; and for such unavoidable leakage or collection of water as will occasionally occur, three efficient culverts will be provided to carry it to each shore, from whence powerful lift-pumps will carry it into the sea. The fall is to be from the centre towards each shore, and it is calculated that the crown of

Waghorn and others, has nothing to do with the land, except in crossing Egypt from Alexandria to Suez, and France by the mail route to Marseilles. The saving of time by the latter route, compared with the steamers' track round by Gibraltar is six days. The duration of the voyage and land travelling from London to Bombay averages thirty to thirty-one days. The new route, which will be better entitled to the name of overland, will cut down the distance travelled by more than one thousand miles, one-fifth of the whole, and would,

the tunnel will have a thickness of chalk of 60 feet between it and the ocean bed, at the deepest point, which does not exceed 140 feet below the tidal level, as proved by soundings. There will be three double lines of railway, (three each way), which will be ample for ordinary, goods traffic, and express trains. Ample space is afforded for all necessary pathways, and the telegraph wires will be laid in the centre, on a new principle of economy and ready access. The tunnel, by its length, will thoroughly ventilate itself, but should it prove necessary, three or four, or more, air-shafts can be readily constructed, the upper portions forming light-houses, or refuge in case of shipwreck, and for signalling ships in the Channel. The cost is estimated at £6,000,000, and the time for construction seven years. The whole of these works are proposed to be carried out in connection with Mr. William Hutchinson's patent, which we have so often noticed in our columns, for converting into an indestructible building material river or sea sand, shingle, chalk, and other soft and comparatively worthless substances. As it is to be geologically assumed that the stratum to be cut through is chalk, Mr. Austin proposes to construct his three roadway-arches of large blocks of masonry, bound together in a peculiar manner (illustrated by a diagram in their description in the *Mining Journal* of Dec. 1), such blocks to be formed from the excavating material, carried to the indurating works (to be constructed at each end), and reconveyed to the portion under completion, ready to be placed *in situ.* As these blocks would occupy the space of 40 or 50 bricks, be rapidly formed in the raw state of the material to the shape required, and quickly indurated to a degree which the chisel will scarcely touch, it is expected the work would proceed with a rapidity hitherto unknown in the history of tunnelling, and that the time named by Mr. Austin will be ample for its completion.—*The Mining Journal.*

therefore, save one-fifth of the time; but for other reasons the reduction of time will be greater. The passage through Egypt is doubtless interesting to the tourist, but so also must be the route of the Euphrates, while the new will be undoubtedly a more pleasant journey than the present line, since the voyage up or down the Red Sea is never agreeable, or in any way interesting, and the strength of the monsoons will be outflanked by taking the Persian Gulf, instead of crossing the Indian Ocean to Aden. Indeed, the present route perpetuates the old error of circumnavigating a continent merely on a smaller scale. The traveller is taken round Arabia and Africa, and he gains the difference in bulk between Arabia and Africa, if his destination be Kurrachee. The direct course will be from London to Kurrachee, *viâ* Trieste, Seleucia, Ja'ber Castle on the Euphrates and Bussorah at the head of the Persian Gulf, and the journey will occupy 14 days 12 hours. Even if travellers to Bombay were taken round by Kurrachee they would reach the former port in three days more, or 17½ days; but by a direct line from Bussorah their journey will be accomplished in fifteen to sixteen days—saving nearly one-half in time.

The present proposition is to connect the Mediterranean and the Persian Gulf by a railway from the ancient port of Seleucia by Antioch and Aleppo, to Ja'ber Castle on the Euphrates, of eighty miles in length, and afterwards from thence by Hit, and other towns, to Bagdad, or on to Kurnah, at the confluence of the Euphrates and Tigris, or Bussorah, at the head of the Persian Gulf. Thence by steamers, communication will be established with all parts of India.

The country through which it is proposed to carry the railway, was by command of his Majesty William IV. examined and surveyed, with the view to the introduction of improved means of transit by that distinguished officer, Major-General Chesney, R.A., F.R.S., who reports that

there are no serious difficulties to contend with; and subsequent scientific investigations under Captain Lynch, C.B., and Commander Campbell, both of the Indian Navy, and Mr. William Ainsworth, the well known geologist and geographer, sent out in charge of an expedition by the Royal Geographical Society, have confirmed the accuracy of General Chesney's opinion.

It is only proposed at present to execute the first section, about eighty miles of railroad, from the ancient port of Seleucia on the Mediterranean, to Ja'ber Castle on the Euphrates; below which point, the navigation of the river is permanently open for steamers of light draught and the boats of the country for 715 miles to Bussorah, at the head of the Persian Gulf.

Mr. Laird has undertaken to furnish steamers to navigate the Euphrates, capable of carrying a large amount of merchandize and passengers, at a speed of twelve knots an hour when loaded, and with a draught of two feet.

Regarding the ancient navigation of the Euphrates, Mr. Peacock remarks, in his learned and lucid evidence before the Select Committee of the House of Commons, in 1834, on steam communication with India, that Herodotus "mentions the freight of the boats that carried the produce of Armenia to Babylon to be 5,000 talents in weight, which would be about 128 tons, the freight of the largest Thames barges. These were boats only for the voyage to Babylon, and were there broken up; they were either coracles on a large scale, or rafts surrounded by, and floated on, inflated skins; when they brought a cargo to Babylon, the wood of which they were composed was sold, and the skins were carried back by land on asses, which had been brought down in the boats for that purpose."

"A very great portion of the supply of Babylon was from Armenia. Herodotus speaks of the vessels as being

very numerous, but of its being impossible to return by any mode of navigation, on account of the force of the stream. I mentioned 5,000 talents in weight, Beloe translates it 5,000 talents in value. If that was the silver talent only, it would be one million sterling, which is impossible for a single boat load of the produce of Armenia. The next ancient account of the navigation of the Euphrates which I wish to notice, is the expedition of the Emperor Trajan; he constructed a fleet in the mountains of Nisibis, and floated down the Euphrates. Gibbon says he came down the Tigris. It would be easy to demonstrate that Gibbon was misled by an article by Monsieur Freret, in the Memoirs of the Academy of Inscriptions; but going over the text of Dio, which is the principal authority we have upon the subject, it is very manifest that it was the Euphrates, and not the Tigris, that Trajan came down. The next is the expedition of the Emperor Julian, who followed the route of Trajan: he came down the Euphrates from the mountains of Nisibis also; his fleet consisted of 1,100 vessels, 1,000 vessels of burthen, 50 vessels of war, and 50 for constructing bridges. Ammianus Marcellinus, who was the historian of the expedition, and was in it, says this fleet made narrow the most wide river Euphrates. *Classis latissimum flumen Euphraten arctabat.* And this was in reference to the upper part of the river, where all the difficulties are supposed to exist. Both these expeditions were in the spring, March and April; they began the descent of the river on the rising of the river."

"The water begins to rise in March and continues to rise till the beginning of June; at that time there is nowhere less than 12 feet in the river, some say 16."

"As to the present navigation of the river, there is a great deal of navigation from Bagdad to Hillah, the ancient site of Babylon; but there is none now (*i. e.* in 1834) above Hillah,

in consequence of the disturbed state of the country. In the time of Queen Elizabeth there were many merchants of England who went by that route, which was at that time the high road for travellers to India: there was a regular fleet of boats for the voyage kept at Bir. Merchants from England, Fitch, Eldred, and several others, describe their having gone with merchandize from the Mediterranean to Bir, and in large companies. They put this merchandise on board the vessels at Bir: they say, 'these boats be but for one voyage, for the strength of the stream makes it impossible to return;' and with this merchandise they went down the Euphrates to Felugia; thence (by a canal 17 miles in length) to Bagdad, then down the Tigris to the Persian Gulf, and so to India."

The route from the Mediterranean was mostly from Latickea. "There are many old travellers who describe the voyage down the Euphrates, and *none of them speak of any physical obstructions*.

"I think it would be highly serviceable, if possible, to prevent Russia pre-occupying it and excluding us; it would be exceedingly easy for Russia to follow the steps of Trajan and Julian, construct fleets in Armenia, and float them to Bussorah; they have the possession, at least the command, of the Armenian part of the Euphrates now (*i.e.* 1834).

Apparently there would be more danger to be apprehended from the Russians, from their making use of the Oxus and Caspian, than by making use of Bussorah, where they would be met by the nation which happens to have the pre-eminence at sea. "But," says Mr. Peacock, "the pre-eminence at sea is not a talisman; it is to be kept up by constant watchfulness and the exertion of adequate force. I know there is danger by the Oxus, but there is also danger by the Euphrates, and I would stop both doors, if I could."

"The first thing the Russians do when they get possession of, or connexion with, any country, is to exclude all

other nations from navigating its waters. I think, therefore, it is of great importance that we should get prior possession of this river."

The establishment of steam along the Euphrates would serve greatly to counteract the designs of Russia; "by giving us a vested interest and a right to interfere. If they should make a treaty with the power it belongs to, that none shall navigate it but themselves, we should find it a more difficult business. They have been long supposed to have designs on Bagdad; they have had emissaries there a good while: The Paçhalick of Bagdad is a very valuable possession, and would pay for protecting it, either to them or to us."

In comparing the probable relative commercial advantages of the Red Sea with that by the Euphrates and Persian Gulf, Mr. Peacock gives the preference to the latter :—"the trade of the Persian Gulf with India is three to one to that of the Red Sea: there was formerly a great deal of commerce in those countries, both in the time of the Assyrian empire and in that of the Caliphate of Bagdad, and in many intermediate periods."

With reference to the different routes proposed for steam communication with India,—"I have been," says Major-General Chesney, in giving evidence before the already-mentioned Committee of the House of Commons, "on four different routes, the one being through Turkey. I came down the Danube and crossed the Black Sea, and that part of Asia from Trebisond to the Euphrates, which concludes the first route, as proposed by the Right Honourable John Sullivan, viz., up the Rhine, down the Danube, across the Black Sea to Trebisond, and thence to the upper Euphrates, this river being part of three of the lines. The second is from Malta to Constantinople on to Trebisond, and either the same route onwards by the Eu-

phrates or through Persia. The third is Egypt. I was in Egypt in the year 1830, going onwards to the ceded provinces, having other objects in view, when I saw some queries that were sent out by Lord Aberdeen to obtain information as to the best line of communication with India; there were several queries relating to each, framed, as I have since understood, by Mr. Peacock. I wrote to Sir Robert Gordon, proposing to examine the (route by) Egypt immediately, and afterwards to descend the Euphrates, if he encouraged it. Accordingly I went to Suez, sailed down the Red Sea to Cosier, crossed to the Nile at Kenné, sailed down that river and examined the port of Damietta, Lake Menzaleh, &c., and forwarded a Report of the result to Sir Robert Gordon, on the 30th of September, 1830* The fourth route is the Euphrates. After I had examined the Red Sea, Sir R. Gordon's answer reached me at Beirout; he seemed to think the undertaking hazardous, and as there was a report that Capt. Mignan was instructed by the Court of Directors to examine the river, his Excellency observed that unless I had it to myself it would not be worth the risk, and in consequence I gave up the idea of going down the Euphrates and went straight to Damascus; there I heard of the death of three persons, viz., Mr. James Taylor, Mr. Aspinall and Mr. Bowater, going to examine the Euphrates. I accompanied the caravan to El Kaim on the Euphrates, and the moment I saw this splendid river, the project of descending it seized me powerfully, and circumstances favoured the attempt. I was unwell, and taking advantage of this, I asked the Arabs at Anna whether they could not make me a raft. It appeared that they were much better accustomed to raft making than I was myself; they undertook the task, and after some difficulties and delays, the raft was ready. I set out

* Vide Reports by General Chesney, Appendix, No. 8.

from Anna to go down the river accompanied by my interpreter, a servant and three Arabs; two of the latter were boatmen, the other a sort of guide and protector. In setting out to examine the river, I had a memorandum given me by Mr. Cartwright, the Consul-General, to show the objects which it was desirable to ascertain, viz., the depth of water, the nature of the river, its conveniences, and other particulars. The depth of water I ascertained by means of a ten feet rod attached to the raft, and immersed in the water to that extent; when it did not touch it showed the depth of the water exceeded 10 feet, and when it did touch, I took it in my hand and measured the place exactly; in that way I proceeded, noting the villages, counting the houses, and taking the bearings all day; at night we came to, close to an uninhabited island, and the fifth day I arrived at Hitt, having made all the notes necessary to form the groundwork of the great maps on the table, the speed of the stream being the basis of the operation, and bearings backward and forward were carefully taken at each turning of the river. At Hitt I changed my raft for one of the boats made there of osiers covered with bitumen; I chose a country boat because it was more like the natives', and with this I sailed down again in the same way to Feluja, opposite to Bagdad, where I arrived in less than five days from Hitt; this was in the beginning of January, 1831. I crossed the country to Bagdad, where Major Taylor, the Company's resident, took a great interest in what I had been doing. Once there, it seemed desirable to remain and finish the maps so far, before I recommenced descending the stream, and accordingly I wrote to Sir Robert Gordon to say what I had done, and that as soon as the maps were completed I would descend the river to Bussorah. Whilst laying down these maps, Major Taylor received from Bombay an authority to survey the river, and he immediately sent away Messrs.

Ormsby and Elliott down the Tigris, and to ascend the Euphrates to the place where I had left off. They returned to Bagdad, having failed in getting higher than Hilla, and Major Taylor determined to send them off to Bir to descend the stream from thence. I felt somewhat uncomfortable at the idea of interfering with these two persons, as their prospects depended much on their success, and being more inclined to further their plans, I was inclined to give up the field to them; I offered the use of an Arab boatman well acquainted with the river, and also gave them my interpreter. They declined the boatman on account of the expense, and subsequently returned the interpreter for the same reason, after taking him some little distance on their journey. At this moment Major Taylor recommended me to resume my plan, as two accounts, he observed were better than one. I went back to my boat at Feluja, and sailed down to Hilla: this part of the river is little known, so much so that I cannot find the trace of any European having navigated it either in ancient or modern times. In old times the traveller always stopped at Feluja, crossed to Bagdad, and went down the Tigris, therefore it was fortunate that I resumed my plan, for as Messrs. Ormsby and Elliott did not accomplish their descent, we should still be ignorant of the state of this part of the river. I had left these maps with Major Taylor to copy for the Supreme Government, and afterwards to send them to Sir Robert Gordon. Having arrived at Hilla, I got a little schooner and sailed down through the Lemlun marches to Bussorah; from Bussorah I went to Bushire, where some difficulties about the quarantine, on account of the plague, prevented my landing; I then sailed up the Karoon to Shuster, where I finished the first memoir, and sent it off. After that I journeyed through Persia, and there the Envoy took a great interest in the question of the Euphrates, as connected closely with Persia, and he made the

Reports now on the table. On leaving Persia I went to Trebisond, and crossed the Taurus range to Aleppo, and Bir also, across the country between that place and Scanderoon. From Bir I went up the river, a good way above Samsat, near Malatea, from whence I crossed to Orfa, meaning to regain the river and descended to El Kaim Towers, where I originally commenced. But at Orfa there came a Turk to me in a very mysterious way, and said there had been some discussions about me: some said I was honest, and others the contrary; I gathered that I was likely to be waylaid as a spy of Mahomet Ali; this determined me to change my route and go back to Bir, so that I was thrown out in my plan of visiting that part of the river towards El Kaim; and with that exception, I can speak of all the rest of its course personally, more than 900 miles."

"*My opinion is, that there is no doubt about its (the Euphrates) being navigable for eight months in the year, and its being navigable for the other four months for shallow vessels. Individually I have no doubt about its being navigable also throughout the low season;* but I will explain the state of the river in detail, beginning at the Estuary, and going upwards in the same way that a steam vessel would do when coming from India towards Bir."

"*It so happened that I was twice on the Euphrates during the low season, and once in the flooded.*"

"The printed Reports contain a detailed account of the great river, following its stream from Armenia to the Persian Gulf; therefore it may make the explanation clearer to reverse it, and ascend the stream, as a steamer coming from India must do; width being the first consideration, depth the second, and strength of current the third.

"Although occasionally much more, the breadth of the Euphrates varies between 200 and 400 yards; for even where the rocks and fords exist, as described in the Reports,

the stream still maintains its spread, nor would the existence of the former be apparent, were it not for the irregular surface above them: and I am the more anxious to make this point quite clear, because it seems to have been supposed by some that the river is at times limited to the width of the deep passage between the rocks, which are indispensable to the commerce carried on in the clumsy country boats, but which would not interrupt a wider river steamer of a shallow construction. In fact the only exception to the great width alluded to, takes place in the Lemlun Marshes, where the river is deep and entirely free from rocks; but for a distance of about 60 miles, the main stream narrows to about 80 yards.

" As to the second point, the general depth of the upper Euphrates exceeds 8 feet, with the few exceptions to be stated by-and-bye in their proper places.

" In point of current, the third leading consideration, the Euphrates is for the most part rather a sluggish stream; for, except in the height of the flooded season, when it approaches 5 miles per hour, it varies from 2 to 3½; but certainly with a much larger portion of its course under 3 than above, particularly the 701 miles from the town of Hit to the sea; above that place it frequently exceeds, 3, below it is rarely much more than two.

" But to go more into detail at the low season, beginning with the sea:—

" On the bar, at the principal branch, there is a depth of 18 feet; from thence to Korna, 104 miles, it varies from 3½ to 7 fathoms, the general width varying between 350 and 600 yards.

" Upwards from Korna we have the Euphrates only, with its volume diminished, it is true, by the loss of the Tigris, yet still a noble river, averaging about 300 yards broad, with a depth of from 2 to 3½ fathoms all the way from Korna to

Castle Geran Shoal, 186 miles; here a narrow pebbly bank crosses the bed of the river, and reduces the depth for a moment to 3½ or four feet; this is close to one end of Grahim inlet, at the eastern extremity of the Lemlun Marshes, which extend about 61 miles, and are watered by three divisions of the Euphrates, each considerable as to size, and all navigable. The principal one which the steamer would follow, makes a tortuous course, carrying a width in general of more than 80 yards, though occasionally reduced to 50; and having a depth of from 6 to 9 feet, though very rarely the former. This part of Mesopotamia is so very level, that the flooding of the river makes little difference as to depth; for being without the high banks existing elsewhere along the river, the increased water spreads out into a wide shallow lake, just enough to prepare the ground for rice.

" The windings of the main stream through the country of Lemlun reminded me of the Frith of Forth below Stirling, but as the turnings are not so sharp as the latter, which are navigated several times every day, we have no reason to fear that a steamer will pass without the slightest difficulty; especially as the latine vessels of the country of from 50 to 80 tons do so in great numbers.

" On the western side of the Marshes, we meet the united stream such as we had left it on the eastern, viz., averaging about 300 yards broad and from 9 to 18 feet deep for 15 miles to the derivation of Ramahieh, near the town of Dewania; and thus it continues for 86 miles more up to Hilla (ancient Babylon); at this town we meet for the first time a bridge, the river having narrowed for the moment to 450 feet, with a depth of 18, and as might be expected in consequence, a strong current just below the floating bridge; one boat is moveable in the centre to facilitate commerce, but the width of the steamer would require two to be removed.

" From Hillah to Feluja Castle, is a distance of 110 miles,

with a depth at the low season of from 9 to 18 feet, and the width varying between 250 and 500 yards, with the exception of at the town of Musseyil, 74 miles from Feluja, where it is 13 feet deep, and narrows to 160 yards, the length of its bridge; that of Feluja being 123 yards in the low season, and 150 during the high one.

"From Feluja to Hit, we have a distance of 140 miles by the river, without its being narrow enough at any point to construct a bridge; the width is rarely much under 300 yards, and is frequently as great as 600, or even more, with a general depth of upwards of 9 feet; to which there are but three exceptions: viz., the occasional ford of Bushloub, marked No. 39, with an ordinary depth of 6 feet (and therefore it has not been passed by camels once during the last 20 years); Abou-Sisa, marked No. 38, and Souab, No. 37, are the other two, each with 3½ feet water at the lowest season.

"This has brought us to the town of Hit, the Is of the ancients, to whom it was just as well known on account of the fountain of bitumen, as it now is to the modern possessors. This place is 639 miles from Bussorah, and about half way to Bir in point of trouble, while it is more than half in point of distance; on which account, as well as the prospect of making the bitumen available for fuel, as a consequence of making permanent arrangements along this line.

"In continuing onwards, we meet the island of El Oos, at a distance of 84 miles above Hit; the general character of this part of the river as to width and depth is the same as that below; but the current is a little more rapid, and we occasionally meet some rocks, which is not the case downwards. There are nine exceptions during these 84 miles to the general depth of 9 feet; three of these are the remains of irrigating walls in the river a little way above Hit, each of them causing a few inches fall. Two are camels' fords, both free from rocks, and with 3½ feet water; and the re-

maining four have rocky bottoms, limited in one place to 3 feet in depth, but generally 5, and the surface almost unbroken.

"We have now reached the town of El Oos, without having encountered anything which can be fairly considered an impediment even to a large-sized steamer; therefore we have 786 miles of open navigation throughout the twelve months, viz., from the Persian Gulf to this island.

"Within the succeeding 170 miles above El Oos are comprised all the difficulties to be encountered in navigating the Euphrates; and to these, which only exist during the four months' low water, I would entreat the particular attention of the Committee.

"From El Oos to Anna we have a distance of 106 miles along the river, which winds exceedingly, as will be evident from the great maps; a range of hills encloses each bank: there are several good-sized towns, the islands are numerous, and the aqueducts of the irrigating mills literally cover the banks.* Here the width of the river varies from 250 to 500 yards, with a general depth of 8 feet.

"There are, however, eight exceptions to the depth, Nos. 20 to 27; two of these, Nos. 23 and 24 are camels' fords; four more, Nos. 20, 21, 22, and 26, have rocky bottoms, with a broken surface, causing falls about 6 inches, or even more at some places; but all have a sufficient depth of water to make them safe to pass in the night. No. 25 is rather more serious; here we have a fall, or to speak more correctly, a difference of level, of 18 inches in 50 or 60 feet distance, with a depth exceeding 3 feet; this place, I presume, could not be passed after night, still less would it be practicable to overcome the remaining one, No. 27, in the dark. At this

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* History presents many examples of the preponderance of Utilitarianism over Ornamentalism. The Holy city is one mass of ruins, but

one, the whirlpool of the prophet Elias, there is a fall of two feet in seventy, with a depth of 4 feet 9 inches, and a current for the moment of 5 miles per hour, a broken surface and a rocky bottom for some little distance both above and below the whirlpool.

"This place is much dreaded by the Arab boatmen in descending, but my raft of 14½ by 13½ feet (not the most manageable thing in the world) passed down without any difficulty."

At some parts of the river "the country boats are lightened to a depth of three feet, to facilitate their passage; and when it is remembered that this rudely constructed bark has a flat floor of 40 feet by 12, at a depth of 4 feet, with wall sides (and I have met some of much larger dimensions), her passing at all times between Anna and Giaber, and even to Malatia, *during the low season, is one of the best possible proofs we could have that this portion of the river is quite navigable for steam.*

"Besides which fact, drawn from the existing state of things, (*i. e.*, in 1834) we know, that up to fifteen or even twelve years ago, it was the habitual custom of the Sultan to send guns and heavy stores to Bagdad by way of the river; and the last person who was sent by this route gave me a de-

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the pool of Bethesda is still as it was when the angel came down annually to disturb its waters. The columns of Persepolis are crumbling into the sands by which they are already half engulphed, yet its cisterns and its aqueducts still remain to fill the wanderer with admiration. Nero's Palace of Gold is a myth, a thing that has been, yet the Aqua Claudia still flows into ancient Rome. The temple of the Sun at Tadmor, in the Wilderness, is now fallen and desolate amidst the silence of the sandy desert, and yet who does not know that its sparkling fountain still remains, flashing as in days of yore when myriads crowded round that now abandoned spot. The tomb of Joshua is forgotten, but the well of Jacob is known to every overland traveller.

tailed account of his descent from Bir, during the month of November, (the river being at the lowest) when a deeply laden boat passed downwards day by day, without having been obliged to lighten on any occasion.

"But our information is not confined to Asiatics, for in addition to the minute details of the commerce between Armenia and Babylon, as given by Herodotus, there are several descents on record of mercantile travellers, during the 15th century, when it appears to have been the custom of merchants to carry their goods to Bir, to hire water transport downwards, and at times they remained until a little fleet of small vessels was assembled to make the voyage to Feluja together.

"In 1574, during the months of September and October, the traveller Rauwolf descended the Euphrates, in a loaded boat from Bir, which the master run aground from carelessness, on a sand bank, the first day, near Giaber; Rauwolf goes on to speak of Racca, and other towns descending: he observes that the water was low at Deir in October, and details his voyage to Anna and Feluja, without any other serious difficulty after the first one.

"In December, 1579, the Venetian merchant Balbi reached Bir, and having embarked his goods for Feluja, Bagdad and the East Indies, he remained at that place until the 11th of January, 1580, waiting for five other barks to go in company. Balbi mentions some shoals as well as rocks, causing two falls above Anna, and he notices the whirlpool below, which he calls dangerous passages; but he seems to have reached Feluja and Bagdad without any other cause of uneasiness.

"John Newberrie embarked at Bir, the 15th of October, 1581, on board a bark laden with honey, cordovan leather, fish, wax, &c.; part of the cargo was sold at Deir, and they reached Feluja without any difficulties being noticed as having been encountered in the descent of 15 days; and

nearly all the towns and remarkable places are mentioned by Newberrie.

"In 1583 Ralph Fitch, a London merchant, sailed down the Euphrates; his voyage from Bir to Feluja was accomplished in 16 days, without having encountered difficulties; though (he adds) it is not good for one boat to go alone, lest she might be broken, and the goods would then be plundered by the Arabians.

"Sir Anthony Shirley descended the Euphrates in the autumn of 1599, in company with the cadi, defterdar, and others going to Bagdad; he made the voyage in thirty days, resting at night, and gives many details of the towns, &c., without alluding to any difficulties in the navigation.

"John Cartwright also made a voyage about this period, but the year and month are not given; he speaks of the river at Bir being as broad as the Thames at Lambeth, and almost as swift as the Trent. Cartwright alludes to the low season, saying that the merchants are fain to carry with them a spare boat or two to lighten their own if they should chance to fall upon the shoals. He also adds that they carried on a trade by barter with the Arabs; exchanging coral, amber, knives, glass, &c., for different kinds of provisions, butter, fruits, &c.

"In my last journey I examined the country between the Mediterranean and Bir, which is particularly favourable, in every respect, to the proposed communication; and I also followed the river itself from several miles above Samsat to some distance below Bir, throughout which distance it is much deeper than at and below El Kaim, and, in fact, carrying such a volume of water as to leave no doubt in my mind that it is quite open from thence to El Kaim, as the boatmen at Bir stated it to be, not only to that place but also to Anna.

"*Such is my view of the depth, &c., of the Euphrates, from the sea to Bir, during its lowest and most difficult state; and*

as the impediments have been placed at the very worst, it is certain that any one who may be called upon to overcome them, will find his task somewhat less than he is prepared to expect.

" As to the question of navigating the Euphrates during the low season, the Committee (for steam communication with India) will perceive that this is narrowed to the consideration of the limited depth of water at some places between El Oos and El Kaim, about 170 miles; and after the deepest consideration, it appears to me, that a steam boat of 75 feet by 16 on the water line, would undoubtedly pass up this part of the river, when drawing from 22 to 24 inches. By giving her a spoon or parabolic shape, for the advantage of steering through short turnings, she might be of greater dimensions as to accommodation, viz.:

85 or 90 feet on deck.
75 on the water line.
16 feet beam.
Depth of vessel, 5 feet.
Engine of 18 horse power.

Flat bottom midships for one-third of the length on deck; draught of water, with four days' coals, 22 to 24 inches; to be of iron, and the lightest construction; copper boilers."

" The Euphrates ceases to decrease about the middle of November, from which time until near the end of December there is no sensible difference; at this period it begins to be fed (owing to the early rains) by the increase of the Melas, Khabour, and other mountain tributaries; at times this increase is so limited as to make a difference almost imperceptible; but at others the depth of the river is increased nearly a foot in the early part of January. Whether the winter's increase has been 12 inches or only one, the Euphrates continues almost stationary from the early part of January until a little before or a little after the 27th of March, when the

grand rise begins; the river subsequently continues swelling and extremely muddy until the snow water begins to descend and change its colour, which happens about the 26th of April; the increase is afterwards more rapid, and thus continues until the 21st or 28th of May, when the highest point is attained, and the depth at Anna has been increased by 11 or 12 feet, and lower down by 15 or 18. During 20 days, from the 11th to the 31st of May, the current rather exceeds five miles per hour; therefore tracking boats upwards is abandoned for that time, and is afterwards resumed against a current of about four; the river subsequently declines very gradually and regularly in depth and speed up to the lowest point in the middle of November, from which we started in taking the glance just completed of the 12 months.

"The Tigris, although classed with the Euphrates too frequently, is very different in every respect, being more tortuous, more rapid, and subject to different laws in its floodings. This river not only begins to rise in November, but attains a considerable height before the end of the month, after which it suddenly falls, and is again as suddenly swollen at uncertain moments, up to the middle of January, when its permanent rise begins; subsequently it continues increasing, though occasionally falling a little, till the 15th of May, when it is at the highest, with an increased depth at Bagdad of 15 feet. The river subsequently declines in the same irregular way, but there is sufficient water for large boats to reach Bagdad until August, when smaller ones, drawing about five feet, are used until the end of the year as far as Bagdad. Between that city and Mosul, the river is at some places rocky or shallow, but there is water enough at all times to float rafts of firewood, and even merchandize, over the rocks from Mosul to Bagdad at the low season.

"The Euphrates, on the contrary, is extremely gradual and regular, both in its increase and diminution, quite as much

so as the Nile, and very similar in every respect (as far as my acquaintance with both enables me to judge), with the single exception of the flooding, which takes place earlier in the Asiatic than in the African river.

" From the end of March there is a considerable depth of water in the shallowest places of the Euphrates; so much so that there is little question of rocks until some time in November, since it is apparent that they are covered with 14 feet of water during the greater part of the interval from March till November.

" On perceiving the great power of the Euphrates in the flooded season, and that its dangerous bearings on India involved deeper considerations than those of steam communication, it struck me that it would be right to make this part of the question the subject of a separate and confidential paper, rather than enlarge upon it in the printed Reports, which are confined chiefly to the low season. I declined the favourable offers I had to publish an account of my voyage down this most interesting stream, endeavouring, instead, to place the subject exclusively before Government, in such a way as would give ministers the free option, either to open the navigation, or to leave matters pretty much as they were, without telling too much to the world about the real state of this interesting stream, which in fact presents the easiest possible route for a Russian force to threaten India.

" It is true that India may be approached by five other lines of march as mentioned in the paper on Persia submitted to Government; but it is to be remembered that she is still at some distance from the commencement of any one of them, and that there must be some preliminary steps in any of the supposed cases which would give us notice and time to prepare; whereas in that of the Euphrates she could proceed onwards at once to the Persian Gulf. Russia is actually in

possession of the Turkish province of Achaltziek, within 15 days' march, or even less, of the navigable part of the Euphrates (here called the Murad-Soo) and as she has at command the immense Forests of Armenia, as well as those of the province of Kars near at hand, there could be no difficulty in constructing rafts to any extent. From the 26th of April until the 26th of June *at least*, there is a depth of 12 or 14 feet over the rocks of Karabla; at this time the heaviest guns could be floated down with perfect ease, and long afterwards, in fact all the eight months, there is sufficient water to convey troops and stores. Four or five weeks would suffice to carry the advance of the army down the Murad-Soo to the estuary of the Shut ul Arab, and this speed would give the enemy possession of the numerous small vessels, and ample resources of the rivers and province of Mesopotamia; Bussora would make a good port, dock-yard, &c. opening towards India, as well as an excellent *place d'armes*, from which an enemy might immediately extend himself along the Indian river, and east side of the Persian Gulf as far as Cape Jask, which point is within 625 miles of the Indus, and might be occupied in eight or ten weeks time from leaving Achaltziek.

"It is pretty certain that Napoleon contemplated following the steps of the Emperors Trajan and Julian, and that the Russian war alone prevented his descending by the Euphrates in 1812 to occupy and fortify Bussora as the pivot of combined operations against India; and as Russia was to assist, she must have known, in part at least, the plans of this great captain; and therefore she must know the importance of Bussora as an object to be obtained if possible; and even if we can suppose her to be still ignorant of the existence of an easy open route to that city for an army of *any size*, it is not at all likely that a power so much alive to objects of ambition can remain so much longer; and in this view of the case, it

is not going too far to suppose that it will be one of her first objects; especially as there is no impediment in her present relations with Turkey, to an acquisition which would give her a lever no less powerful and formidable to Great Britain than the control of the Persian empire, her more apparent object at this moment in the East.

"Once possessed of Bussora as a port, and the line of the Euphrates to give the supplies, it would be a work of millions to dispossess the Russians of a line of country, which may be defended with the utmost facility from an attack, whether made from the side of Syria, or that of India; we could not even prevent them extending themselves along the Coast to Cape Jask, and thus not only turning the defences of Persia, but being also as it were in the very neighbourhood of the Indus.

"Giving up all idea of any attempt by sea, it seems to me that it would be almost impossible to interrupt their march onwards from Cape Jask; for, admitting for a moment that supplies could not be obtained as in the time of Alexander, and subsequently by a Cailiph of Bagdad, Mohammed Bin Kassim (who reached India through this country in 677 of the Hejira); an enemy might have his stores and supplies carried in a flotilla of flat boats, creeping along shore step by step with the army, from headland to headland, ready to be beached under protection of the whole army whenever our ships meditated an attack, which under such unfavourable circumstances could not be made with the least chance of success. Therefore, if ever Russia should obtain the line of the Euphrates, she will then have it in her power, either to meet our troops on the Indus, or take the surer but more dangerous course of remaining in this threatening position, gradually approaching our territories; which would of itself shake our moral power over the natives, independently of the minor consideration of a heavy expenditure for a flotilla

to watch the Gulf, and additional troops along the north west frontier towards the side of Persia.

"It is manifest that operations against India by any of the five routes through, or bordering on Persia, must be attended with great loss from climate alone, during a march of about 2,000 miles; whereas, in the case of the Euphrates, the army would be conveyed rapidly, and in an efficient state, to the seat of operations; in which view of the bearings of the Euphrates, the question of a rapid communication is of little importance, when compared to the paramount one of forming a barrier against Russia, based upon a more extended and beneficial commerce to ourselves, to our eastern colonies, and to Arabia."*

The preceding opinions and statements were given in evidence prior to the Euphrates Expedition, and it will be seen by the following extracts that they were entirely confirmed by the official reports of General Chesney and his officers, after the survey of the Euphrates had been accomplished.

Bushire, July 17, 1836.

The noble and interesting river Euphrates is far too celebrated to require more from me than a fair view of the facilities afforded by it for steam navigation, and of the prospect it offers for establishing an economical and more rapid communication between Great Britain and her Indian possessions, than has hitherto been obtained:—the brilliant prospects of a new channel being opened to our enterprising mercantile world, through a steam establishment on the Euphrates, ought to awaken our best energies.

I consider that a rapid steam voyage may be performed both up and down the Euphrates, at any season of the year.

(Signed) R. F. CLEAVELAND.
Lieutenant R.N.

Colonel CHESNEY, R.A., &c., &c.
Commanding Euphrates Expedition.

* Vide Report on Steam Navigation to India, ordered by the House of Commons to be printed, 14th July, 1834.

Euphrates Steamer, Bushire, July 17, 1836.

Considering, therefore, Ja'ber as the upper station on the river, there remain 938 miles of navigation from that place to Basrah. In this distance I consider we have but two impediments which are worth noticing. The first is the Karáblah rocks, two miles above 'A'nah, and the second the Lamlúm Marshes.

The Karáblah rocks have ten feet water over them in the high season, and three feet at the lowest, the stream running over them at the rate of seven miles per hour.

We have already a diving-bell at this place, which at a small expense might clear away the rocks so as to give a passage of 4½ or 5 feet water in the low season.

From El'Uzz to Lamlúm, or rather to four miles above the latter town, we have 288 miles of a beautiful river, the average depth in this distance being three fathoms, with the exception of some places, a little below the town of Hit, where ten and twelve feet would be the average.

They (the Arabs) always evinced great eagerness to barter their provisions, and in fact everything they possessed, for our Glasgow merchandise, which consisted of handkerchiefs and shawls principally; so that I am convinced considerable commerce would be carried on with great success on the river.

Taking all these things into consideration, I should say it would be highly advisable to navigate the river, as being the speediest and most secure route between Great Britain and her Indian possessions. (Signed) E. P. CHARLEWOOD.

Mate R.N.

Colonel CHESNEY, R.A., &c., &c.

Euphrates Expedition, Bushire, July 15, 1836.

The descent of the Euphrates steamer on the falling waters between March and July has sufficiently proved, in such a way as to leave little doubt in my mind that at the lowest

season the river could be navigated, or at all events be easily made navigable.

The advantages which would ensue from the establishment of a regular steam communication on the Euphrates would, I am convinced, amply repay any outlay and trouble which might attend the commencement.

The avidity with which the inhabitants of different towns on the river bought our Manchester woollen goods, &c., sufficiently proves that a great opening is presented to our commerce. Aleppo, Bagdad, Basrah, and, should the Kárun be navigated, Ispahán, would soon become marts for British produce, and the influence of the English name be thus increased and extended.

(Signed) JAS. FITZJAMES, R.N.

Colonel CHESNEY, R.A., &c., &c.

Basrah, August 31, 1836.

The whole line, from Ja'ber to a little below Díwáníyah, is a long course free from impediments. There are some few places, where, to conduct a vessel safely and surely, it is necessary to be acquainted with the line of the deep channel, such as at Karáblah, 'A'nah, and two places above both, where reefs of rocks stretch across the river; but where, I believe, a channel does exist sufficiently deep to float such a vessel as the "Euphrates." There are, along the line I have mentioned, many projecting ranges of arches, formerly used in irrigating the neighbouring lands, and there are some insulated rocks, but in no case offering impediments of a serious nature when their positions are well understood.

Below the line I have mentioned, until arriving at the termination of the Lamlúm Marshes, the river is more difficult, owing to the very sharp windings and the greater narrowness, so that in this part I do not consider that the "Euphrates" steamer is suited for the navigation. Yet

there would be no difficulty for a shorter vessel. From below the Lamlûm Marshes to Basrah the river presents a fine, wide, deep, and easy course; and a still larger vessel than the "Euphrates" might easily perform the voyage.

I think it will be seen, perhaps, that the navigation of no river was ever commenced under such favourable circumstances.

(Signed) J. B. BUCKNALL ESTCOURT,
*Captain 43rd Light Infantry.**

COLONEL CHESNEY, R.A., &c., &c.

Bushire, July 17, 1836.

The river Euphrates is evidently a navigable stream. I am acquainted with it from Sumeïsât, in the Taurus, to its embouchure in the Persian Gulf, a distance of upwards of 1,200 miles; and in that extent there are only two real difficulties, both of which are superable, by undergoing an expense quite disproportioned to the importance of rendering efficient at all seasons of the year, and throughout so lengthened a course, the navigation of this noble river.

There is, indeed, amongst almost all the tribes a cupidity that is easily aroused, and which would stir the people up to new exertion in order to obtain comforts and luxuries with which they would then first become acquainted, and could not be slow in appreciating. The boasted frugality and indifference of the Arab are not proof against the inventions of an improved mechanism in cutlery or fire-arms; and nowhere is there displayed a greater anxiety for gay dresses and ornaments: this taste is indeed almost a passion with both sexes. With abundant instances of the operation of these incentives, we have also seen examples of feelings common to human nature (a nature which is less barbarous here than is commonly supposed) of the love of decorating their

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* This distinguished and accomplished officer died when Adjutant General of the British Army in the Crimea.

children, and of a desire to improve their condition; nor is there here any of the Bedawín apprehension of doing what may be considered derogatory to the discipline handed down by their ancestors, or capable of affecting their warlike independence.

The whole character of the descent of the river made by the "Euphrates" steamer, demonstrated in the most decisive manner that the great moral difficulties which it was supposd would have to be overcome, only exist in the exaggerated alarms created by the predatory habits of the Bedawín of the Desert, or degenerated tribes like those of Sinjâr. The Arabs, I firmly believe, never dreamt, and are incapable, except when guided to it by superior wisdom, of a combined plan of operations. But it was an unexpected spectacle which was offered at the opening of the navigation, in the coming forward of the sheiks and elders of the most reputable and powerful tribes to cultivate the acquaintance and seek the protection of the commander of the Expedition.

When a melancholy accident deprived the Expedition of half of its physical power, the same impression continued in operation; and instead of a demand of tribute or customs, as was so confidently anticipated by some, the tribes were ready even with pecuniary sacrifices to seek the protection of the British flag.

That little dependence can be placed upon the Arabs, is, with regard to many of the most affluent tribes, only the calumny of an irritated or an ignorant traveller. At all events it must be kept in mind, that the first who may bring those uninformed nations in contact with a civilization which excites their love and admiration, is at least the most likely to establish lasting associations in their bosoms in connection with the early dawn of a new order of things.

The advantages which are presented by the opening of the navigation of the river Euphrates belong to universal civili-

zation, as well as to an increase of national power. The waters of this great river flow past the habitations of upwards of four millions of human beings, amongst whom their own traditions have transmitted the sense of a revolution to be effected by the introduction of a religion of humility, of charity, and of forbearance.

The intellectual powers of the descendants from the most noble stocks of the human race are not extinct in their present fallen representatives, and it would be difficult to say to what extent civilization might flourish when revived in its most antique home. The mental privileges of the Arab, overwhelmed by moral despotism and political insecurity, are not less than those of their Assyrian, their Babylonian, or their Palmyrean ancestors.

The national importance of this navigation is of the most comprehensive character. Every one acquainted with the history of the communication of nations, which, as Montesquieu has ably pointed out, is the history of commerce, must be aware that those circumstances which led to the annihilation of the commerce of the East, would be revolutionized by the opening now proposed to be effected; and that while civilization might be confidently expected to return to its almost primeval seat, it would do so under a very different aspect, and with vastly improved means over the days of Opis and Ophir, or of Cercusium and Callinicum.

All these advantages are to be obtained by the navigation which you have entered upon, and of which you have proved the practicability.

(Signed) William Ainsworth,
Geologist to the Euphrates Expedition.

Colonel Chesney, R.A., &c. &c.

"The exploratory voyages in descending and ascending the rivers Kárún, Tigris, and Euphrates, have," says General

Chesney, "sufficiently proved the practicability of their navigation with vessels of a suitable construction."*

February 22, 1855.

I may remark that I commanded the Euphrates Expedition for a year, and made the ascent of the Euphrates from its mouth to Beles in two steamers, which are now on the Indus, Nimrod and Nitocris, in 1840, and am acquainted with the whole of the tribes and difficulties. I cannot advocate the route for passengers *until steamers are placed on the rivers;* but of the practicability of the line (of the Euphrates) there is *no doubt,* and of course from Scinde it becomes still more available.

I shall be glad to learn the above being of use to encourage the project.

I should say vessels smaller than the Indus boats would be needed at *first,* but not much; those now on the Indus were the ones I worked up the Euphrates in 1840.

All (the tribes) are disposed to come to terms with the English, if we once made our appearance.

(Signed) C. D. CAMPBELL,
Captain I.N.

Capt. B. K. FINNIMORE, &c. &c.

The results of the Exploration of the Euphrates from its commencement under General Chesney, may, we believe, be thus stated:—

1. The descent of the river Euphrates from Bir to Bussorah, by General Chesney.

2. The navigation of the river Karoon from Mohamrah to Ahwaz, by the steamer *Euphrates,* commenced by the officers under General Chesney.

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* Vide Expedition for the survey of the rivers Euphrates and Tigris, by Major-General Chesney, R.A., F.R.S., &c. Ordered by the British Government. Longman, Brown, Green, and Longman. 1850.

3. The ascent of the Tigris as far as Bagdad, and the further ascent of this river towards Mosul, by the same officers.

4. The ascent of the river Tigris to Koot Abdullah, near Mosul, by Captain Lynch. This ascent proved the practicability of the navigation of the Tigris as far as Mosul, during the freshes, by vessels properly constructed.

5. The passage of the Leglowiyan Canal between the Tigris and Euphrates, near Bagdad, by Captain Lynch. Had this canal, which was subsequently destroyed by Aali Pasha, remained open, the results of a direct and short water communication between the two rivers might have proved highly important. The navigation of the lower part of the river Euphrates, which on account of the Lemlum marshes, might have been avoided, and the ascent of the river commenced above Hillah.

6. The ascent of the Hud, by Lieut. Campbell; of no practical importance, but interesting as proving that this body of water is derived entirely from the Tigris, and is not the outlet of any river descending from the Persian mountains, as generally conjectured.

7. The ascent of the river Euphrates from Bussorah to Belis by Lieut. Campbell. The most important event of the expedition with reference to the difficulties to be surmounted, and the dangers to be encountered.

8. The passage of the Hie, by Lieut. Selby; of great practical importance in a commercial point of view, and an undertaking of no small difficulty and danger, from the character of the Arab tribes occupying its banks.

9. The ascent of the Kirkah to a considerable distance by Lieut. Selby, chiefly interesting in its geographical results.

10. The ascent of the Karoon from Mohamrah to Ahwaz, and its subsequent ascent from Mohamrah to Shushter; of

the Aub Gargar, from its junction with the Karoomal Band-i-Kio at Shushter; and of the river Dizful, from its junction with the Karoon to the vicinity of Dizful, by Lieut. Selby.

11. The navigation of the Bamisheer, from Mohamrah to the sea, by Lieut. Selby; also of high importance to British commerce, as proving a communication between the Persian Gulf and Mohamrah, and the Karoon, for vessels of large burthen, without entering the mouths of the Euphrates.

Such are the chief results of the Euphrates expedition, many of which, it will be perceived, are of the highest importance. From the various successes attending the above undertakings, and from the observations which were made by the officers employed, we may come to the following conclusions:—

1. That the river Euphrates, from Korna to Bir, is navigable throughout the year by boats properly constructed.

2. That the river Tigris is navigable at all times of the year between Korna and Bagdad, for vessels drawing less than five feet water.

3. That the Bamisheer is at all times navigable for vessels of a large size.

4. That the Karoon and the river of Dizful are navigable during the freshes, and probably throughout the year, to vessels properly constructed, the only obstructions occurring at Ahwaz, at which place the river Karoon is crossed by a bund—through an outlet in which Lieut. Selby was able to warp a steamer without difficulty.

5. That the Hie is navigable from the Euphrates to the Tigris during the freshes. The obstructions occurring in the stream from banks raised by the Arabs for the purpose of exacting tolls from vessels, being merely temporary, and easily removable.

A few words upon the history, and the results of an undertaking which, at its commencement, excited no ordinary interest in Europe, may not be unacceptable to the reader.

Few expeditions were commenced under more favourable auspices than that destined for the navigation of the river Euphrates. The management was confided to an officer, equally distinguished for abilities, for enterprise, and for scientific, geographical, and historical knowledge. The officers who were appointed to accompany him, were men of experience, and well calculated to superintend an arduous enterprise. The object contemplated by the expedition was the establishment of a rapid and safe communication with India, and the advantages which might accrue to British commerce, and to British influence, were not to be lost sight of.

General Chesney gave to the world his great work on the Expedition and its objects, and Mr. Ainsworth, the eminent geologist and geographer, who accompanied the expedition, published his private memoranda upon the geography, geology, and natural history of the countries watered by the Euphrates, the Tigris, and their confluents, and his work was highly creditable to his perseverance and scientific knowledge.

It appears that the East India Company, after the transfer of the steamer *Euphrates*, still anticipated important results from the navigation of the rivers of Mesopotamia. Three new vessels were added, and in the year 1840, four steamers under British colours floated under the walls of Bagdad. The company directed the new vessels to be shipped in pieces in England: in this state they were sent round the Cape, and put together under the superintendence of competent engineers at Bussorah.

In the spring of 1841, Lieutenant, now Captain C. D. Campbell, I.N., commenced with the steamers *Nitocris* and

Nimrod, the ascent of the Euphrates, and surmounting all difficulties, reached Belis. In those days it required remarkable courage, perseverance and skill, to effect its successful ascent. By all these qualities Lieut. Campbell was eminently distinguished. His mild and amiable disposition rendered him an universal favourite amongst the Arab tribes, as well as amongst those natives who were immediately connected with the expedition. His knowledge of their character, his patience and equanimity, enabled him most effectually to conciliate the wild inhabitants of the banks of the Euphrates. Those only who are acquainted with the difficulties to be encountered in the first ascent of a river like the Euphrates, can appreciate the success of Lieut. Campbell, which was unattended by a single accident or objectionable occurrence.

The steamers remained at Belis during the greater part of the year 1841, and their presence is said to have had a decided influence in the north of Syria during the war with Mehemet Ali.

During the absence of Lieut. Campbell, the *Euphrates* and *Assyria* steamers were confided to the care of Lieut. W. B. Selby. This enterprising officer explored the river Karoon, the river of Dizful, the Kerkham, the Hie, and the Bamisheer. He ascended the Karoon to Shushter, both by the main body of the river, and by the Aub Gargar, or artificial canal: he fully established the practicability of the navigation of the Bamisheer, and proved the possibility of communicating by steam between the Euphrates and Tigris by the Hie: and should a steam communication be hereafter established on the rivers of Mesopotamia and Susiana, for commercial or other purposes, (which we firmly believe will before many years be the case,) the discoveries of Lieut. Selby will be duly appreciated. This officer was, by his courage, perseverance and scientific knowledge, admirably calculated for an expedition of this nature. By his valuable charts and

reports, he has illustrated the comparative geography of one of the most ancient, although least known, provinces of the Assyrian empire—Susiana. He has connected by scientific observations the course of the Eulœus, the Choaspes, the Copratcs, and the Pasitigris, with the range of mountains forming the great chain running to the east of Shushter, and with the rivers Euphrates and Tigris. He has proved the practicability of rivers, the course of which was hitherto almost unknown, and all his discoveries will confer important benefits upon British commerce.

9th July, 1856.

I deeply regret (says Captain C. E. Campbell,) that time will not permit me to enter upon the subject of the navigation of the Euphrates at the length or with the consideration that the subject deserves; I must confine myself to a few remarks to record my most unqualified opinion that the Euphrates is navigable the whole length of its course from the Persian Gulf to the highest point to which my own observation has extended—namely—*Beles*.

In the high season, when the snows melt above, the river becomes a vast expanse of water, offering really no obstacle to vessels of considerable draught of water and respectable speed, navigated with skill and local knowledge of the river.

In the low state of the river, the volume of water is greatly reduced, especially from September to December, when the channel becomes contracted and the difficulties increased. But inasmuch as the bed of the river is thus less extended, and the flow of the water still fully equal to the Rhine, a practicable passage is the more certain of being found, provided vessels of suitable size, draught and speed are made use of.

The fords in the upper district of the river offered the greatest difficulties to the vessels hitherto used. There the depth is *never less* than two feet three inches, and as the

steamers drew three feet six inches, it was an evident impossibility to get them over these points; they therefore had to be dragged *through* them by main force.

There are several dangerous places in the district between Anna and Hit, which is very mountainous, and the river bed contracted and tortuous, causing numerous little falls or rapids, which have plenty of water but great velocity; but the greatest velocity by actual trial was found to be a little less than 6½ knots (or nautical miles) per hour,* hence is not more than the ebb spring-tide through the arches of Blackfriars Bridge, and the seriousness of such an obstruction is thus clearly and correctly to be considered as trifling when breasted by vessels of a speed of twelve knots.

The above-named spots seemed to me, in ascending the river as very formidable, but on our return we found our fears had exaggerated the nature of the danger, and improved knowledge enabled them to be passed without the slightest accident.

The lower part of the Euphrates becomes a sluggish, turbid stream, wide and deep till past Hillah, when it becomes lost in numerous cuts and ultimately overflows the country, and is difficult to navigate with convenience and speed; I therefore think that it should not be adopted as a route for the steam-vessels, but that they should turn off at Felugia and pass through a canal to the Tigris, a little below Bagdad (already open for the purposes of cultivation), and thence descend the Tigris to Bussorah through a channel of far superior character, which can be navigated by night as well as by day, by vessels drawing nearly four feet water.

* The general velocity of the current is *never* more than four knots in the high season, and three in the low, in the upper district of the river. In the lower district, the current is not more than 2 and 2½ knots all the year round.

The difficulties of navigating the Euphrates may be classed under two heads, viz., moral and physical; the first from the state of the tribes and country generally being without rulers or protection, causing great trouble and anxiety, but by no means insurmountable, as our experience of the tribes justifies me in saying that they can be induced by conviction of their best interests being identical with the opening of the river, to render valuable and steady aid where they before showed hostility and suspicion, and thus cause these moral obstructions to actually melt away before the progress of events.

The second, or physical difficulties, were indeed formidable to steam navigation in its infancy; but, I may ask, where is there now difficulty in obtaining boats to run a speed of 12 to 13 knots and drawing not more than two feet water? Such boats are to be seen every day on the Thames, and with them the Euphrates can be navigated from end to end. Skill and experience, and a little outlay will remove may difficulties which our ignorance of the localities and set of the current made us regard as very formidable; and the fact that a sufficient volume of water always finds a vent, *without anything like* the perils of the iron gates of the Danube, will show that there is no *really* serious or insurmountable obstruction to be overcome.

(Signed) C. D. Campbell, I.N,*

W. P. Andrew, Esq.

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* Extract from a Memorandum on the Navigation of the Euphrates by Captain C. D. Campbell, I. N., addressed to W. P. Andrew, Esq., Chairman of the Euphrates Valley Railway Company.

(EXTRACT.)

DEAR SIR, *15th July*, 1856.

In constructing (writes Captain Charlewood,) your contemplated Railway between the Mediterranean and the Persian Gulf, it occurs to me that one of the very first steps to be taken, is the navigation of the Euphrates with an efficient flotilla of steam-vessels.

By adopting this course a strong moral influence will be obtained over the Arabs, an influence which, indeed, already exists over the tribes located between Bagdad and Bussorah, where one steam vessel is still retained by the East India Company for the purpose of maintaining order.

I also fully anticipate that a passenger and goods traffic can be commenced with success, without waiting for the completion of the Railway between Seleucia and Ja'ber. At present the river districts receive their supplies through Bagdad, Damascus, Aleppo, &c., after a costly desert journey; if, therefore, the proposed steam vessels can at once place depots of the class of goods required, at the different towns on the banks of the river, the low rate at which these goods could be sold, would surely be beneficial and assist to pave the way for a free and secure communication between this hitherto almost inaccessible country and the modern civilized world.

But the question here arises, Is the Euphrates navigable?

I must regret that it is necessary to discuss this question, doubts still existing in some persons minds, notwithstanding the almost unanimous voice of the officers who have taken a part in the surveys of this great river. I say *almost* unanimous voice, having been informed that one officer (and I believe one only) who has examined the Euphrates, has pronounced it to be unadapted for navigation, principally upon the strange ground (if true), that at the low season "it dries up into pools."

"True it no doubt is, that at the low season the Euphrates does form pools of water; but, as another officer who has great practical knowledge of the river, has recently observed "*there is always a considerable stream of water joining these pools together.*"

General Chesney's expedition (in my connection with which I have always felt the greatest pride) was located for at least one year upon the banks of the river, below the town of Birjick, and about one hundred miles above where it is proposed to commence the navigation. Here at all events, we have proof enough that the Euphrates never dries up, but at the lowest season is a good sized river, rolling onwards in a considerable volume of water, about thrice the size and volume of the upper Thames where that river is not affected by the tide. Considering also the large tributaries the Euphrates receives in its course downwards below Birjick, it manifestly must be an error to suppose that it ever dries up into pools of water.

And now with reference to the least depth of water in the low season. I will pass over that great authority, General Chesney, whose favourable opinion must be known to all interested in this matter, and who carefully sounded the river as he passed down on a raft during the low season (although possibly not at the very lowest), and at once call your attention to the opinion and experience of a thoroughly practical and able officer, who, with the exception of General Chesney, has had far greater opportunities of obtaining a knowledge of the capabilities of the Euphrates than any one else. I allude to Commander Campbell of the Indian navy, who took two steam vessels of unsuitable dimensions from Bussorah to Beles and back. This officer had opportunities of deliberately obtaining the depth of water in the very shallowest places, and he states that this depth of water in one place (the Hainadee ford in the

upper part of the river) was two feet three inches at the *lowest.* But of this there is some little question. His first lieutenant, who assisted in obtaining the soundings, on referring to his notes, finds that the least depth was three feet. Captain Campbell, however, to ensure against error, assumes it to be two feet three inches for four months in the year. He also expresses a decided opinion, that with proper vessels, the Euphrates is capable of navigation throughout the year, there being no difficulties equal to the iron gates upon the Danube. My experience of the river entirely confirms Captain Campbell's views, and feeling assured of the correctness of that officer's soundings, I do not hesitate to state my conviction that *there are no obstacles to the navigation of the Euphrates from Ja'ber to the Persian Gulf throughout the year.* Before quitting this subject I may perhaps mention that those persons who are still doubtful about it, may argue, that although it is true steam vessels have succeeded in passing up and down the river, yet it has not been satisfactorily navigated by them The reply to this argument, I think is clearly unanswerable, namely — The lowest depth of water had not been correctly ascertained, and consequently the vessels were in most respects unadapted to the navigation.

Let us imagine an officer being ordered to survey the river Thames above bridge, and for this purpose he was supplied with a large steam vessel drawing five feet of water, and with an average speed of 6½ knots an hour. What should we think of this officer's opinion, if, after the failure he must of course undergo, he reported that the Thames above bridge was not navigable, that he found it full of rocks and shoals, some with only three feet of water over them, and that the rapids between the bridge piers (*i.e.*, the rocks) were terrific, their rate being about seven knots an hour, whilst his vessel would only steam 6½ knots? And yet

this cannot not be very dissimilar from the true position of those, who having examined the Euphrates in unsuitable vessels, pronounce it to be unnavigable. *The rapids in that river beyond question have less velocity than the rapids between the Thames bridge piers.*

That the Hainadee and other fords may if necessary be deepened with a trifling expense, is an after consideration; it is clearly desirable in the first instance, to construct vessels which can navigate the river in its present state throughout the year, and ultimately it may also be found judicious to have a larger class of vessel to navigate during the high season.

An efficient flotilla must be provided to commence with, and I have no doubt as to Mr. J. Laird of Birkenhead, who has the greatest experience in building iron vessels for river navigation, being able to construct suitable steam vessels for the Euphrates, and drawing not more than two feet water when loaded.

It would of course be impracticable to accommodate many passengers in steam vessels of this class. Captain Campbell's proposal to tow the passengers in iron flat boats fitted for the purpose, is therefore, manifestly the most feasible method.

(Signed) E. P. CHARLEWOOD,
Captain, R.N.

W. P. ANDREW, Esq.

A steam route being thus established by rail and river between the Mediterranean Sea and the Persian Gulf, the shortest and most rapid means of communication between the capitals and emporia of the West and East would be at once open for political and commercial purposes. It being intended to co-operate with the river and make it available for commerce, by removing natural obstructions, and introducing steamers of improved construction, and to supersede it gradually by the railway as the future sections of the Line are carried down the valley of the Euphrates, from the right bank

opposite Ja'ber Castle to Phumsah, the ancient Thapsacus. Crossing into Mesopotamia at this suitable place, the railway will be carried along the plain between the Euphrates and Tigris by Anah and Hit to the environs of Bagdad; and thence by Babylon and Hillah to the confluence of the Euphrates and Tigris at Kurnah, where there is sufficient depth of water for the largest steamers; or to Bussorah, thirty-seven miles nearer the head of the Persian Gulf, where an extensive trade is already established, and where there is ample accommodation for square-rigged ships of large burden.

With the forts and docks of Sebastopol ends the dream of the conquest of Stamboul by the barbarians. Nevertheless, a great authority has lately told us, through a most unexpected medium, that "the war has repelled Russian aggression for the time, but .... it does not offer us a permanent and sufficient security. It has gained us *breathing time*, and breathing time may be all-important." A well known traveller and explorer in the East has also publicly called attention to the fact, that " The neutralization of the Caspian Sea, still a Russian lake, is deemed worthy of consideration by these unpolitical people who have been suspected of discussing, *en petite comité* the subsidizing of Schamyl, the exclusion of Muscovite influence from Kurdistan, and the re-establishment of British *prestige* in Persia, the salvation of Khiva, and the curious, though scarcely the delicate question,—What are the frontiers of Russia in Central Asia? The Araxes, or the Persian Gulf, or the river Indus?

" Early in the present century two great military routes, according to Sir J. M'Donald, connected Russia with northern India. The line of least resistance, if we may trust Eldred Pottinger, lay through Mushed, Herat, Cabul, and Candahar to Peshawur. The other, passing by Bokhara, Balkh and the Hindu Kush, was deemed impracticable until

General Harlan's Paropamisan march with artillery in 1838. This subject engrossed the attention of Sterling, Conolly, Burnes and Abbot, Mouravieff, Orloff, Zimmermann, and a host of others. Captain Grover complained that the British public believed Bokhara to be in Persia. But in 1836 Mr. M'Neill went to Teheran as minister, and Mr. David Urquhart became secretary of embassy at Constantinople, while Mr. B. Fraser remained as oriental reporter in Downing-street. The Eastern question was written up, skirmishers were thrown out in the daily papers, the monthlies swept the field in serried files, cavalry and artillery succeeded in pamphlets and reports, the heavy quarterlies acted as support, and a huge portfolio the reserve; the Guards' charge was, the "Progress and Present Position of Russia in the East." M'Neill, Chesney, and their followers, proved the northern apothegm—"The road to the English lies through Persia." They showed that an invasion of India was not only possible, but probable. To the frigid apathy of 1828, succeeded the fever fit of 1838, and relapses of Russophobia through the five subsequent years.

"Presently the question of Indian invasion, *viâ* Persia, chameleon-like, changed its colour. In 1839 Perofsky advanced upon Khiva, "to strengthen in that part of Asia," said his master's manifesto, "the lawful influence to which Russia has a right." *Honneur oblige!* At the same time, England prepared to push a spider's web beyond the Hindoo Kush for the purpose of entangling Dost Mahomed. It is printed, that Baron Brunow then remarked to Sir J. Hobhouse, "If we go on at this rate, Sir John, the cossack and the sepoy will soon meet upon the banks of the Oxus;" and that the president replied with a spirit,—'Very probably, Baron; but, however much I should regret the collision, I should have no fear of the result.'

"In this year of grace, 1856, the Proteus once more alters

shape. The sun of Circassia, Persia, Kurdistan, Khiva and Affghanistan, has sunk below the political horizon in England. Russia has pushed on her lines through the dark. The first parallel, the Caucasus, is, and is to be, purely Russian. The second, Persia (allowed in Nasir El din Shah's day peacefully to occupy the Herat, for which Mahomed Shah was all but invaded), is also exclusively Russian. The third, Affghanistan, remains; but the head of the Russian sap, diplomacy, is firmly planted in the land."*

Active and efficient measures might have broken up these parallels, and crushed Trans-Caucasian Russia, even in the last campaign. As it is, Russian conquest has only changed its direction—foiled on the shores of the Euxine and the Sea of Azov, she turns to the Caspian and the Sea of Araal.

In Western Europe pageantry may be said to be passing out of date, for neither is it felt nor is it required. We have to travel two thousand miles towards the rising sun, to penetrate frontiers almost sealed to the traveller, to plunge into barbarous tribes, and find ourselves in the heart of an ancient serfdom, in order to see in full force the old language of human magnificence. The cavalcade which ten days ago conducted the Emperor of All the Russias into his ancient palace is a fit successor of the old Roman triumph. In this country none ever saw its like; none ever will; and were the States of old Europe to become even greater and wealthier they would neither have the materials nor the sentiment for such a display. No doubt they who gazed on that rushing stream of silver and gold and jewels, of the finest horses and men, the most singular races, and the quaintest costumes in the world, extending five miles in length, and who also knew that in all that multitude of observed and observers there was probably not one who was not ready to die for his youthful Emperor, could hardly but feel him to be the greatest

* Letter by Richard T. Burton, Bombay Army.

sovereign in the world. We shall not question it. For such titles there is no contention in these days. The subjects of Queen Victoria count three to one for those of the Czar; their wealth, their freedom, their arts, the grandeur of their traditions, their historical antiquity, are even greater in the scale of comparison. Nevertheless we need not dispute that there is no such potentate, so autocratic, so exalted, so magnificent, as Alexander Nicolaievitsch; and that he is the only one of the sons of men whose position entitles him to such a procession as that described in our columns this day. No one but he combines with Asiatic magnificence European policy, organization, and wealth. No one but he holds the greater part of two continents, and occupies the shores of two oceans, and two great inland seas. No one but he is absolute lord of sixty millions of men, still retaining the hardihood and prowess of ancient barbarism. Nations are fused into the ranks of his army, and history may explore the roll of his procession. When he enters the famous Kremlin, it is a portion of the human race that conducts him; and the roll of names reminds one of those which heralded the earliest conquerors of mankind.

"Yet the slightest reflection is enough to remind us that, whatever the meaning and virtue of this pompous cavalcade, it denotes not unbounded power, paramount destiny, immutable institutions, or anything beyond the common lot of humanity. Let marshals, and chamberlains, and masters of ceremonies do as they will, they cannot fix for ever the type of human events, even those of the most arbitrary and artificial character. In all its circumstances, even those which contribute to its grandeur, the coronation of Alexander II., is a very different thing from that even of his father thirty years ago. In that difference we read the law of progress, to which even imperial institutions must bow. But what are these circumstances which forced themselves

on the notice, even amid the roar of artillery, the clash of bells, the braying of trumpets, and the shouts of awestruck multitudes? What are the events even more striking than the wild costume and caparisons of Calmucks and Mingrelians, and Circassians, and Imeritians—more impressive than the now familiar names of Russia's powerful yet devoted aristocracy? In the unparelleled magnificence of the present ceremonial, in its enormous cost (computed at a million sterling), we see the growth of that wealth which has laws of its own, and which changes institutions even while adorning them. If this occasion is grander than the last, then it is so far another thing than the last, and who shall tell what the next change shall be? Sixteen hours brought Alexander with perfect safety and comfort from the shores of the Neva to the walls of Moscow. Who could have dreamt of that in the year 1826? Yet the railway from St. Petersburg to Moscow is only the first link in a fretwork which is to cover the whole empire. By the electric wire some particulars of the actual coronation reached this city yesterday, and might have come in less than a minute. In the representatives of the British press, and the numerous other strangers at Moscow, we see the forerunners of a vast influx, which cannot but be beneficial to Russia and to the general interests of the world. All this portends change, for improvement is change, though seldom without some sort of sacrifice. But who could forget, even while gazing on that spectacle of glory and might, that but one year before Russia had been compelled to abandon the vast port and arsenal she had prepared for the extension of her empire further into the heart of three continents? This mighty pomp, full of traditions of the past, and bursting upon us like the very climax of imperial splendour, comes indeed at the moment when Providence has pronounced the doom, "Thus far, and no further." Henceforth all these nations

and tribes will have other employment than to augment their muster-roll. The list is complete. The work of conquest is done. In that vast human column we read the working of a great policy, but we read it to the end. Such is the true reading of that gorgeous living inscription. What shall we read when next the roll is opened?

"But these are not the thoughts of an envious rival. It is Russia's best interest to give up a dream which, at the best, is one of misery, bloodshed, and injustice, and to escape the inevitable retribution that hunts down the conqueror. Russia's own statesmen know this, and they are preparing to divert and concentrate all those mighty energies and all those fresh impulses to the internal and social improvement of those sixty millions. Unassailable within her own frontier, secure of the implicit obedience of her people, Russia would be without excuse were she still to convert the strength of all that people and all that soil into the means of destruction. The war itself has happily brought to light the want of internal communications, and the disadvantage any state so conditioned must lie under in comparison with its wiser and more fortunate neighbours. The few miles of railway which we have laid on Russian soil are a hint which she will improve a thousand fold. So all those numerous tribes that figure in Alexander's long triumphal escort, though thirty years ago they might be a warlike demonstration, to-day only celebrate the triumphs of peace, and ask for the universal extension of its benefits. They represent how much is to be done, and what duties devolve on the man who claims the lordship of so vast a territory, and the obedience of so many races and tongues. The government that can muster all these men, to march in one column to one solemn measure, can do more. It can give them all leisure, opportunity, and encouragement for those works of peace

which even savages and soldiers love better than war, when the choice is offered them." But will it be offered to them?

Let us not be dazzled by such a picture. Russia may pause to gather strength, but she is still ***Russia,*** and a "PEACE RATIFIED MAY NOT BE PEACE SECURED."—So far as the present security of the Ottoman Empire is concerned, no one disputes that the objects of the war have been, to a certain extent, attained. The neutralisation of the Black Sea—the demolition of Russian fortresses—the reduction of Russian armaments, which once existed in dangerous proximity to Constantinople—each of these is unquestionably a concession of no trifling moment. The restoration of Ismail—that blood-stained trophy of the ambition of Catherine the Second and of the ferocity of Suwarrow—affords an important security to the Sultan against any further aggressive movement from Bessarabia. The residence of European Consuls at Sebastopol and Nicholaieff will effectively prevent the sudden appearance of a Russian fleet in the waters of the Golden Horn. Of still greater consequence is the admission of the Ottoman Empire to the dignity of a place in the general Councils, and a participation in the benefits of the international Code of Europe. But the question still returns, whether, even allowing that much has been done, much more might not easily have been effected—whether all has been insisted upon, which would certainly have been conceded—whether the concessions actually obtained are such as under existing circumstances the Allied Powers were not only entitled, but bound by the clearest rules of policy to demand. The late war, like wars of a less recent date, has shown convincingly that Turkey, formidable in her means of defence upon the Danube, is essentially weak on her Asiatic frontier, and that her vulnerable point can be most easily reached, not by armies menacing Widdin or Silistria, but by armies defiling through the passes of the Caucasus. On this side,

there is still no material guarantee afforded against Russian aggression. Deprived of its Asiatic provinces, it is plain that the Ottoman Empire could not for six months together hold its ground as an independent power, or be prevented from falling by a general insurrection of the Christian races under its dominion. The security of Asiatic Turkey should therefore have formed an indispensable condition of the Treaty of Paris. As it is, if ever a new cause of quarrel brings the Muscovite and Ottoman armies once more into mortal collision, we may be assured that the former, taught by experience, instead of attempting that front movement which has again and again been frustrated, will confine their operations to attacking that flank of their adversaries which is still left unprotected, and which, under existing circumstances, it would perhaps be impossible successfully to defend. Let us add to these considerations the consideration no less important to England, that Persia is still as much exposed as ever to the march of the Russian forces, and that Tiflis commands not only the road to Teheran, but the readiest route to the gates of Herat. If British India was ever endangered by the ambition and intrigues of the successors of Peter the Great, it may be imagined whether the peril is less, now that Russia, barred from the further development of her power in Europe, is compelled to turn her attention to Central Asia, and to substitute in her visions of future conquest the Southern Coast of the Caspian for the Southern Coast of the Euxine Sea—now that, in addition to her long-standing jealousy of England as her great rival in the East, she is further excited against this country by the remembrance of a serious injury, and the shame of an open defeat. To France and to Austria it is of little consequence, whether Circassia is free or dependent—whether Georgia is occupied by the troops of Abdul Medjid or the troops of the Czar Alexander. But the statesmen of England may yet

live to lament the day, on which an invaluable opportunity was lost of protecting the shores of the Indus by an alliance with the warlike tribes who command the banks of the Terek, and of making the ridge of the Caucasus the advanced line of defence of our empire in Hindostan.

In the sixth number of Dr. Petermann's *Mittheilungen über wichtige neue Erforschungen auf dem Gesammtgebiete der Geographie* there is an interesting article on West Siberia, its physical nature, industrial products, and geographico-political importance. According to this description the Siberia of now-a-days, in consequence of the constant advance of the Russians towards the south, contains regions that may be called the Italy of Siberia, and which in respect of climate do in fact equal the Italy of Europe. The territory that the Russians have taken possession of during the last ten years between the Caspian Sea and the Empire of China, in the direction of our Indian possessions, is more extensive than Great Britain, France, Turkey (in Europe), and all Germany, including Prussia and Austria, put together, and gives into their hands the keys of the fluvial territory of the Jaxartes and the Oxus, within the confines of which the ancient realms of Bockhara and Kokan' lie. Petermann's description of the extent, population, and political importance of West Siberia is rendered more graphic by two maps of the seven gubernia or governments into which it is divided. The first exhibits the density of the population, by a systematic gradation of the colouring of the maps; the second divides West Siberia, also by its varied colouring, into four separate regions, which he distinguishes as the regions of agriculture, of mining, of fishing, or the chase, and of cattle-breeding, or the region of steppes. To these is added a fifth region, that of the salt-lakes.

According to a recent letter from Berlin, an expedition is just now being fitted out in St. Petersburgh for the thorough

survey and sounding of the Caspian Sea; considerable importance is attached to this undertaking in connexion with the Russian trade with Central Asia, Persia, and the Transcaucasian islands. At the instance of the Grand Duke Constantine, Lieutenant Swaschinzoff was sent in 1854 to Astrachan for the purpose of making a preliminary survey and drawing up a plan for a thorough mapping of the sea and the countries surrounding it. As a fundamental feature of the plan which he has in consequence submitted to the Government, and which has met with approval, that all the hydrographical measurements shall be checked and proved by astronomical observations, Lieutenant Swaschinzoff has selected and sent three naval officers to the observatory in Pultowa, for the purpose of obtaining the necessary instruction; for the astronomical portion of the work, 17,848 silver roubles have been assigned during the years 1856-7.

Sir Justin Sheil thinks it would be advantageous, in the present conjuncture of affairs, for the British to take up "a formidable position at Candahar." He says, that by so doing we should "go far to deter even speculation on the chances of *invasion*."

"Russia," he continues, "may be said to have already announced that she is even now preparing for her next encounter with Great Britain. Her railways have no other end than to transport troops. She found that in the last struggle her weakness lay in the impossibility of collecting her forces at the proper moment on the distant points of her empire. This weakness, she has intimated, shall disappear. But we too, will not remain idle. Our railways in India will advance as well as those of Russia. Established and prepared in Candahar, with a railway running the whole length of the left bank of the Indus, we may await any attempt in calmness. The Russian grenadier now knows his inferiority to the English soldier. The Cossack will find a match in the Hindostanee horseman."

The grand impediment to the improvement and consolidation of the Sultan's dominions is the want of the means of intercommunication, and no measure would promote more effectually their good government, prosperity and safety than that which would lay open to the energy and capital of the emigrant and merchant of the West the expansive and fertile plains of the Tigris and the Euphrates.

To England, the possession of an alternative short route to India is of inestimable value, and more especially when the actual lineal distance will be reduced by more than a thousand miles, and where rich fields are offered to the genius of her statesmen, and the enterprise of her merchants, by giving back to commerce, through the civilizing influence of steam, "countries, the cradle of the human race, and the theatre of the most important events in the Jewish, Pagan, and early Christian histories."*

The traffic by the existing route of the Red Sea must always be confined to powerful steam vessels, being impeded by rocky islands, coral reefs and the nature of the prevailing winds, whereas, in the Persian Gulf, there are no physical obstructions whatever to its free navigation.

"The substitution of land carriage for water carriage, or rather, the substitution of overland cuts for long sea circuits," is, as *The Times* stated in a leading article some time ago, "the one simple principle of the present undertaking."

The importance of the Euphrates as a second and more expeditious route to our Indian possessions is daily forcing itself upon the public mind, and as the whole of Northern India and Central Asia, from the banks of the Oxus to the gates of Delhi, will shortly have an outlet to the sea by the Punjaub, along the valley of the Indus and the Scinde Railway from Kurrachee to Hydrabad, such a route would seem to become imperative.

* Expedition to the Euphrates and Tigris, by Major-General Chesney, R.A., D.C.L , F.R.S , F.R.G.S.

It will also settle the mail route to and from Australia—an clement of prosperity of very great importance—for the passenger traffic *from* the Australian colonies, was nearly one hundred weekly last year, and ere the railway can be completed will be five times that number—of whom more than half will take the shortest route; while the number of emigrants from this country who will prefer a passage of forty to over eighty days may also be fairly expected to be very large.*

* To meet the immediate and pressing demands of the Australian colonies for improved means of intercourse with the mother country, the European and Australian Royal Mail Company has increased its capital to £500,000, with power to borrow to the extent of one-fourth. This increase of capital has been deemed expedient in consequence of the Company having acceded to a request of the Government to provide a steamer to carry the mails between Malta and Marseilles, while they have also resolved to increase the capacity of the vessels intended for the service between Southampton and Alexandria from 1,600 tons and 350-horse power, as originally proposed, to 2,300 tons and 500-horse power. They likewise contemplate having five steamers instead of four, to perform the work between Suez and Sydney. Under these circumstances, their ultimate outlay is estimated as follows:—

Two steamers, European, 2,380 tons, and Columbian, 2,300 tons	£130,000
One steam, Oneida, 2,320 tons	60,000
One steamer, arranging for with Messrs. J. and G. Thomson, of 2,860 tons, builder's measurement, and 650-horse power, Clyde measurement	86,750
One steamer, arranging with Messrs. Scott and Co., of 2,320 tons, 500-horse power, Clyde measurement	70,000
One steamer, arranging with Messrs. Lawrence Hill and Co., of 2,320 tons, 500-horse power, Clyde measurement	70,000
One steamer, for service between Malta and Marseilles, say	25,000
Expense of refitting three steamers	20,000
Expense of furnishing three new steamers, say	10,000
Six barges for coaling at Aden	6,000
	£477,750
If the fifth steamer is built for outside service	70,000
Supposed amount	£547,750

"The sea stages of the present route to India," according

The contract is for five years, at £185,000 per annum, and the continuous monthly service between Sydney and England is to commence in January next. The outer passage from Suez to Melbourne is to be performed in 39 days, and the homeward in 35, under penalties of £50 for a delay of one day, £100 for two days, and a progressive increase of £50 for every additional day; such penalties, however, being limited in the aggregate to the amount of subsidy applicable to the individual voyage. Under all the circumstances, and especially taking into consideration the advantages to be hoped from the line being independent, and, through a part of the route, competitive, there is reason to believe that the Government have made the best choice in their power. The Oneida will be the pioneer of the Company's operations in Australia, and, after her arrival at Melbourne, will be employed between that port and Suez, running in correspondence with other steam ships on this side of the isthmus, between Alexandria and Southampton. The Oneida is to be followed, on the 12th of November, by the Simla, which vessel is one of the finest in the service of the Peninsular and Oriental Steam Navigation Company, and has just been chartered for a term of two years by the European and Australian Company. The European and the Colombian, two other ships belonging to this Company, are now fitting out in the Clyde, and will take respectively the mails of the 12th of December and 12th of January. Besides these fine ships, the Company are now building at Glasgow the Australasian, of 2,800 tons, 700-horse power; the Tasmanian and Asian, of 2,300 tons, and 500-horse power; and the African, of 1,000 tons and 380-horse power; but these vessels, it is not expected can be got ready for their stations before August or September next year. The regular mail service to and from England and Australia, *via* Suez, will not commence till February next, when the first homeward mail may be expected at Southampton The Company, as it is well known, are bound by enormous penalties for the due and proper fulfilment of their contract with the Government, and great interest naturally attaches to the progress of their operations, the establishment of a rapid and efficient postal communication with Australia being one of the most important social and commercial necessities of the day. The Company, since its success in obtaining the Government subsidy, has shown the most commendable vigour and energy in preparing and equipping these ships; and it is to be hoped, not

to *The Times*, in the leading article before referred to, "exclusive of the trip across the Channel, are two: one from Marseilles or Trieste to Alexandria; and the other from Suez to (Kurrachee) Bombay, or Calcutta. These stages constitute by far the longest part of the journey, being 5,075 miles performed by steamers; from which an average speed of some ten miles an hour is all that can be expected. The longer again of these two stages is that from Suez to Hindostan, as it includes a circuit round two sides of the triangular territory of Arabia. The first object, therefore, is to get rid of the detour by Aden; and this is to be done by carrying the passengers to the mouths of the Orontes, instead of the mouths of the Nile, and forwarding them across the Turkish territory to Bussorah, at the head of the Persian

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alone in the interest of the public, and of the enormous mercantile and exchange considerations connected with the question, that success will follow their efforts. Although the Peninsular and Oriental Company were the unsuccessful competitors of this contract, we have great satisfaction in noticing that, on being applied to, the managers at once placed at the disposition of their more fortunate rivals one of their most celebrated ships—namely, the Simla—which vessel is to succeed the Oneida. We understand further, that the European and Australian Company will be much indebted to the Peninsular and Oriental Company for facilities which will be afforded to them at their several coaling stations in Australia and in the Red Sea; all these arrangements having been made and perfected long since by the older company, which formerly had steamers on the station, and which kept up establishments at those places in anticipation of being intrusted by the Government with the new contract.

Thus it will be seen, that the European and Australian Company enters upon its career with every promise of success, to be derived not exclusively from its own efforts, but generously aided by the experience and resources of the largest and most successful steamship undertaking in the world. No jealousy ought to interpose to disturb the good feeling which seems to exist between these two powerful associations; and the public interest, as well as the prosperity of both, would seem to be advanced by the most cordial co-operation. The route to Australia, by way of Southampton, Alexandria, and Suez, is practically quicker by 10 days than that by way of Panama.

Gulf. The railroad required for this purpose would run along the Euphrates Valley, and its length would not exceed 900 miles;* whereas, its completion would reduce the distance from London to Calcutta by more than *one-half*,—by twenty days, in fact, out of thirty-nine! This project, it is conceived, could be accomplished in five years' time; and the route would then lie through Ostend, Trieste, by the Mediterranean Sea, to the Orontes, thence to Bussorah, and by the Persian Gulf to Bombay (or rather to Kurrachee), where it would meet the Indian railroads now actually commenced, and by that time completed to Calcutta (and north-west Provinces). We have thus got rid of the Red Sea circuit, and substituted a land route for 900 miles of the distance. There remains now the straight run from Bussorah to Bombay (or Kurrachee), and the circuitous reach from Trieste to the Orontes, to be commuted for the facilities of direct railway transit by land."

With reference to the above, it may be remarked that a great gap in the Austrian railroad system is about to be filled up. The Austrian Emperor has recently granted to Ernest Merk, his consul at Hamburg, and to H. D. Linheim, merchant, a privilege to construct a railroad from Vienna to Linz, and thence to the Bavarian frontier near Salzburg, on the one side, and to the Bavarian frontier near Passau on the other. The railroad, which is as important for Bavaria and Southern Germany as it is for Austria, will bear the name of "the Empress Elizabeth Railroad." The length of the railroad, from Vienna to Salzburg, is 43 German miles (about 212 English), and from Linz to Passau 12 German miles (59 English). The period granted for the construction of the whole railroad is five years. The plans for the line from Vienna to Salzburg are almost completed. The State, which makes the grant for 90 years, guarantees 5 2-10 per cent. for

* From sea to sea by railway, according to Gen. Chesney, 660 miles.

interest and amortization of the shares. The grantees intend to form a joint stock company with a capital of 65,000,000 florins; and it is probable that the Austrian Credit Bank will be concerned in the undertaking. The Vienna-Salzburg Railroad will, of course, be continued to Munich, and an uninterrupted railway communication will be opened between the Atlantic and the Adriatic, and travellers will hardly be more than 36 hours on the road between Vienna and Paris. The new railroad will, however, be of infinitely more importance to the mercantile than to the travelling world, and this is why far more attention is paid by foreigners to this than to any other Austrian railroad. *It is foreseen that the great mercantile road between Paris and Vienna must soon extend to the coasts of the Black Sea and to the capital of the east (Constantinople). It is stated that a most careful calculation shows that there is a movement of* 2,000,000 *travellers and* 16,000,000 *cwt. of goods in the valley of the Danube in the course of the year, and a total receipt of* 8,500,000 *florins. This revenue alone would give a clear dividend of* 8¼ *per cent. on the capital, after all expenses had been deducted.*

A letter from Pesth, in a recent number of the *Augsburg Gazette*, says:—"A company of rich landowners of Hungary proposes to prolong the railway from Vienna to Raab as far as Belgrade, in Servia, and has already made the necessary applications on the subject to the authorities. An Anglo-French company has undertaken, on the other hand, to construct a line from Constantinople to Belgrade, and has engaged for it 120 French workmen, who, with their families, are to take up their residence in Roumelia. This double line will place the capital of the Ottoman Empire in direct communication with Austria, Germany, and all Europe. The works are to be commenced simultaneously at the two extremities, Raab and Constantinople."*

* Recent letters from Constantinople state, that the concession of the line from Belgrade to the Turkish capital has not as yet been granted.

Engineers have ascertained that a railroad may be carried from Belgrade up the Morava Valley, and thence down the Vardai to Salonica, with less difficulty than between Vienna and Trieste.

Salonica, already a Lloyd's packet station, and Trieste may become the Venice and Genoa of the Middle Ages. Each place is backed by an extensive country.

Salonica is but half the distance to Seleucia of Trieste, or Marseilles. This line is far easier than the one *viâ* Constantinople, and Asia Minor. This shorter line will be advantageous to England, Turkey, and Austria, and be of great political advantage to the Porte, whilst to Austria, it secures Hungary, and the other eastern provinces an outlet by the Mediterranean.

Railroads will facilitate the colonization of Germans in Hungary, by securing for them employment.

The annual expenditure of the State will be reduced by many millions by companies raising the capital, instead of the Government.

Private property will be increased by thus pouring in capital, and even paper currency will become more secure.

Such investment of British capital would carry with it the approval and support of our own Government, and make rebellion less to be feared, both in Hungary and in Italy.

On the other hand, some prejudice exists in Austria, against the employment of foreign capital in an amalgamated railroad. But this is already being overcome, and railways in the Austrian States are now treated as were the railroads of France in 1848.

General Chesney states that Prince Metternich was favourably disposed regarding his former plans of establishing steam communication on the Euphrates so far back as 1839 and 1840, offering to meet the supposed Indian line by steamers from Trieste to Scanderoon.

It only requires 75 miles of railway to complete the

through line from London *viâ* Ostend to Trieste. This portion of the line is rapidly approaching completion, and next year will place London in railway communication with Trieste.

For the conveyance of troops, passengers, mails, &c. from England *viâ* Egypt to the Punjaub and upper India, to the north-west of Delhi, the route by Kurrachee and the Indus is shorter by more than 2,700 miles than by Calcutta and the Ganges, and when the Euphrates valley route is established, the distance between London and Lahore or Delhi by the Indus, will be more than 3,700 miles shorter than *viâ* Suez and Calcutta. The distance from London to Lahore being,

viâ Egypt, Calcutta, and the Ganges . .	9,322 miles.
Viâ Egypt, Kurrachee, and the Indus .	6,615
Viâ the Euphrates, Kurrachee, and the Indus	5,595

By the arrangements now proposed, India would be reached in fifteen or sixteen days, or in about *half* the time now occupied, viz.—

	Miles.	Days.	Hours.
London to Trieste by rail	1300	2	0
Trieste to Seleucia by steamer . . .	1600	6	12
Seleucia to Ja'ber Castle by railway .	100	0	3
Ja'ber Castle to Bussorah by steamer .	715	3	3
Bussorah to Kurrachee by steamer . .	1000	4	0
	4715	15	18*

Even if travellers to Bombay were taken round by Kurrachee they would reach the former port in two or three days more, or 17½ days; but by a direct line from Bussorah their journey will be accomplished in fifteen to sixteen days—saving nearly one-half in time, and when the Indus valley line of railway meets that of the Ganges, the Calcutta traveller will reach

* When the railroad is completed from Seleucia to Bussorah, the time occupied will be 13 days 18 hours.

his destination in eighteen or twenty days, or in about half the time now occupied.

The reports from the officers commanding Her Majesty's ships on the coast of Syria, speak in the most encouraging terms of the site and advantages of the bay of Antioch, and of the superior quality of the water that is obtainable in abundance at the ancient Posidium. The ancient port of Seleucia ought to require no additional proofs of its importance and capabilities, or of what it might yet become by a very small outlay in clearing away the entrance; as for beauty of situation, "the passage by the mouth of the Orontes," say the above reports, "possesses a grandeur rarely equalled even in this beautiful part of the country, Mount Cassius rising abruptly from the sea, with its bold rocky pinnacle towering above the clouds."

General Chesney when proceeding with the expedition, under his command, bore down upon the coast of Syria, in order that they might disembark on the very point which formed the ancient port of Antioch. He sought an entrance at that point in preference to all other places whereby to proceed to Beir, on the Euphrates. All the reports state that the bay of Antioch is very spacious, free from rocks, and well sheltered on every side, with the exception of the south-east, where in the distant horizon rises the lofty island of Cyprus. The anchorage in the bay is, however, good, and the water deep almost to the very beach. Captain Vansittart's report, speaks of the water at Posidium as the best on the coast, and states that the timber for ship and other building purposes, found in the neighbouring mountains, and beyond the ancient Seleucia, is very abundant, and well adapted to meet all such demands. This was the spot selected by Her Majesty's ship, the Columbine, on the 3rd of April, 1835, followed by the George Canning under all sail, and which led the way from the offing towards the anchorage, for the disembarkation of the party destined to proceed on

the expedition to the Euphrates. General Chesney goes on to say—" To the south, as we proceeded, was the lofty Jebel el Akrab (Mount Cassius), rising 5,318 feet above the sea, with its abutments extending to Antioch. To the north the Beilan range (5,337 feet), well stocked with forest trees, chiefly oak, walnut, and fir, and in front the broad expanse of the bay, backed by the hills of Antioch, Mount S. Symeon, or Ben-Kilisheh, covered with myrtle, bay, and arbutus, altogether forming a striking and magnificent panorama."

It may be interesting to mention that this was the point fixed upon by Bonaparte when he proposed to proceed to the Euphrates — when in 1811 he had prepared a fleet at Toulon which was to have disembarked a large force in this bay, — and that M. Vincent Germaine was waiting at Antioch for the expected troops, which had, however, in the meantime, been marched to Russia, instead of, as was contemplated, taking the route from Suédiah to India. The town of Marash was to have been the centre of Napoleon's operations, on account, probably, of the fine forests near that place; but as the adjacent Beilan mountains would have furnished plenty of fine timber close at hand, it is not likely that this great General would have proceeded to Marash on learning that 110 miles through Antioch and Aleppo would have placed him at Beles, 200 miles lower down the river. There is reason to presume that Napoleon meant to carry his troops down the river to Bussorah, but the Russian campaign put an end to this.

" The bay of Antioch extends between the Ras el Khanzir and Cape Posidium, a distance from point to point of about eighteen or twenty miles. The valley of Suédiah, the ancient Seleucia, occupies the hollow or centre of the bay, beginning at the base of Mount Cassius, (a picturesque mountain which tapers to the height of 6,400 feet*) and terminating

* 5318 feet is believed to be the exact height.

at the old port and city of Seleucia, where Mount Rhossus reaches the sea. It is in long. 36°, and includes the beautiful valley of the Lower Orontes, which, after collecting the water from the Turcoman plains, here falls into the Mediterranean.

"*Posidium of Soldini.*—In the angle formed by the shore and Mount Cassius, stood formerly an important city, believed to be the Posidium of the Romans, the Soldini of the Saracens, from an Arabic word signifying "power," "royal," &c.; and as in the plain on the other side, here also ancient tumuli are to be seen, commonly called the Tombs of the Kings or Giants. It is probable that this formed a suburb of the same city. Moreover, close at hand, there is a small lake which some imagine to be the remains of a harbour, which, from neglect, has been gradually filling up, and is now shut out from the sea by the shore. Beneath Mount Cassius, where the road leads up to the mountain pass, are some leech ponds, and the remains of an acqueduct or water course, which having been allowed to go to ruin, the water which still flows out of an adjacent rock, and is as clear as crystal, cool and delicious, escapes, and mingling with other springs, floods the low ground between it and the sea, where, it is not improbable, there was once a harbour in front of the town, yet within the outer wall, and corresponding in position to that of the old port which may still be seen. This spot is now overgrown with canes and rushes, which constitute an article of commerce, quantities thereof being exported annually for the manufacture of baskets.

"The casual observer might suppose that this is an insalubrious marsh; but as the water is never stagnant, it never becomes a source of malaria. The ground adjacent is also well cultivated, the soil is rich and productive, and the inhabitants of the village (which is now called Karajak) enjoy excellent health.

" The shore of Suédiah is composed of a firm sand, like that of Worthing, and there is good and safe anchorage in the entire length for more than two miles out. There are no sunken rocks, and the officers of the *Spartan*, the *Harlequin*, and others in H.M. service who have been there, all speak well of it, and infinitely prefer it to Beyrout and other stations on the Syrian coast. On one occasion the Pacha of Egypt's fleet rode out the gales of an entire winter there, under the shelter of Mount Cassius and the promontory of Possite, or Cape Posidium.

" The men-of-war find it most convenient to anchor from half a mile to a mile off shore, between the embouchure of the river and a small white building with a cupola, which is seen near the beach to the north. In a line with these marks, some distance inland, will be observed a cluster of poplars which mark the situation of the British Vice Consulate, and beyond those on an eminence, the chateau Ruaicy, the residence of Dr. Holt Yates. A ship of the line might ride there securely, she would have plenty of sea room and nothing to fear in summer, and in winter would be better off than at Beyrout or any other place between Mount Cassius and Alexandria; for if it came on to blow hard, she might either take shelter, like the Pacha's fleet, under Mount Cassius, or run for the Gulf of Iskenderoon or Cyprus, as circumstances directed. But all with whom we have communicated agree that the anchorage is good, and that they prefer riding there to Beyrout. Even while I now write, we have accounts of shipwrecks and the loss of several lives at Beyrout, further illustrating the importance of, if possible, finding some harbour of refuge on this coast.

" I am not aware that the Bay of Antioch has ever been surveyed. If not, it certainly should be, as the time may come when British ships of war, as well as merchantmen, may be called on to anchor there, and make the best they can of it."

" The old port, or harbour of Seleucia, too, should be well examined. If it depended upon Englishmen it would doubtless be cleared out and restored, but Turks have neither money nor enterprise. Its basin is capacious; it is enclosed by thick and lofty walls, and well defended both by nature and art. The city is in ruins; the mouth of the harbour is obstructed by sand from the sea, and the interior is overgrown with vegetation, among which are springs of running water, as on the site of what I believe to have been the harbour of Posidium above mentioned. The entrance was formerly defended by massive towers, the greater part of which remain; and there are two piers or jetties, built of enormous stones from twenty to twenty-five feet, by five feet wide, and five feet deep. It was at this harbour that St. Paul embarked for Cyprus, after leaving Antioch, *see Acts*, xiii., 4. There are few things that cannot be accomplished in modern times, when the importance of the object justifies the expenses; and were Suédiah in the hands of Europeans, it would, I feel assured, be restored, and another harbour would perhaps also be made at or near the mouth of the Orontes for steamers and smaller craft navigating the river; for we must not overlook the fact that the day will come (and is probably not distant) when Suédiah will again become the high road to Persia and India, in spite of all that was said by those who preferred the route by Egypt and the Red Sea. Colonel Chesney, and Lieutenants Lynch, Campbell, and others, subsequently clearly demonstrated the practicability of navigating the Euphrates. The obstacles which exist, so far from being insurmountable, would only be named by a great nation because it might not be convenient to undertake the work.

" A canal between the Orontes and the Euphrates might soon be cut, or the transit be completed by a railway, for the distance is only fifty miles for the former, the ground is level,

and there are many tributary streams on the line which might be turned to account. As it is, many travellers proceed by this, the shortest route to Mossul and Nineveh; and we are visited by officers on leave from India, who prefer coming by Bagdad and Aleppo."

"Already one English factory has been built at Suédiah, and others of our countrymen have evinced a disposition to settle there, on account of the salubrity of the climate.

"That there was once a harbour of some kind at the mouth of the Orontes we know from this, that when Godfrey de Bouillon and Tancred were besieging Antioch, they were supplied with stores and provisions by the Pisans, who landed the same at the port of Antioch, and this was long after the destruction of the old port of Seleucia (*see Milman's History of the Crusaders, &c.*). If, then, there was formerly a harbour there, why should there not be again?"

"Moreover, if greater facilities were afforded for landing merchandise, fresh branches of commerce would spring up, especially if Europeans settled in the country; to wit, the growing of wool and the breeding of cattle, the exportation of butter and cheese, the cultivation of opium, scammony, senna, jalap, castor oil, rhubarb, galls, and other medicinal plants, all indigenous to the land; cotton too, and rice, sugar, indigo, flax, and even the tea plant, if the secret of preparing it afterwards could only be got at—not to mention the probability of a new market for English cutlery, hosiery, Manchester prints, and other mannfactured articles.

"The steeps of Mount Rossius are covered with the celebrated Syrian oaks, pines, magnificent box, walnut, sycamore, and other forest trees. Mohamed Ali built the greater part of his ships of war of the oaks grown here, and when Capt. Symonds of the *Spartan* came to Suédiah (in October, 1847), he took away specimens of them, as he thought the subject worthy of attention. Any one is at liberty to cut them, and

they are brought away for the expense of removing, and I believe the *exclusive right* of hewing timber in these forests might be purchased or farmed of the government by paying an annual rental were any objection started to cutting timber on a large scale. There is great facility for removing the trees when felled, and they would be best shipped at Arsoos."

"The importance of Suédiah in a political and commercial point of view, cannot be doubted. Situated at the very gates of Asia Minor, in a fine bay at the mouth of a large river which communicates with an extensive fertile country abounding in silk, grain and fruits, flocks and herds, sheltered by lofty mountains which are well wooded, and show indications of coal, copper, and iron ores, with plenty of lime and stone for building, an abundance of running water, and a fine climate. It attracted the notice of the ancient Romans who, as long as they held possession of Syria, made Antioch the seat of Government. The ancients well knew the value of its position, for it was the great highway between Europe and Asia; then, as now, it commanded the road to the northern and western nations. So strongly was it fortified by nature, that its ruler held as it were the key, and without his permission none could pass the gates; whilst those who could approach it from the east must first traverse a parched and sandy wilderness. On the south it was defended by the sea, and judging from the stupendous ruins which we now behold, it was inhabited by a people of no ordinary talent; their maritime defences were equal to those inland; their fortifications were carried over the tops of mountains; we find watch towers at intervals along the coast, and although little is known of Suédiah in the days of the Seleucidœ, and the cause of their final overthrow, we see enough to convince us that it contained everything essential to a great maritime and commercial people. That they were wealthy and prosperous during a long series of years, appears

from an inspection of their works, to wit, the building of their city, which it is said at one period contained no less than 600,000 persons—its beautiful ports and mole, and its still more astonishing tunnel, which extends more than a mile in length along the heights, and collects and conveys the water from the mountains to the sea,—a work which is only equalled by that of Mr. Brunel, beneath the Thames in London: the catacombs, also, causeways, castles excavations, and numerous other objects.

"Whether their prosperity excited the cupidity of the Romans, or whether they fell from other causes, history is silent. But one thing is certain, Suédiah has been regarded in every age as the key of Syria, which, as I have stated, could only be entered by one of the three passes of Mount Amanus. And the crusaders, it is well known, had to fight their way through them and to subdue the city of Antioch before they could approach the Holy Land. For they had no ships, and in the present day, none but a superior maritime power could hope to enter by any other route. It was to this point that Alexander marched to meet the host of Darius. It was here, too, that the emperor Aurelian encountered the armies of Queen Zenobia; and we may rest assured that if ever Syria is conquered it will be by this same route and no other. Those, therefore, who would prevent it will do well not to lose sight of Suédiah and Antioch. They are no longer fortified as they once were, but the localities remain the same. Many of the munitions of war are close at hand, and under the direction of England or France this district might soon be made to form an impassable barrier. Perhaps I ought not to allude to these matters. But it is impossible for a person who is familiar with these localities to pass them over in silence. We live in stirring times and witness great events. All imagine that we are on the eve of important changes, and that the tide is

running in that direction. Who can observe the signs of the times with indifference? As then a child may puzzle a philosopher, so may an individual gifted with common sense and ordinary powers of observation let fall a hint which abler and more experienced persons may turn to advantage. I have resided at Suédiah three years, and (D.V.) shall return to it. I know it well, and the character of its people, and it has always struck me that if it be really an object of policy to sustain the Turks and uphold the integrity of the Ottoman empire, and, as seems now to be the case, to prevent the aggression of others, means should be taken to support this very important district.

"In Syria the merchants are often put to inconvenience for want of the floating medium. There is little coin because there are not enough people to cultivate the soil; and large districts lie dormant which might easily be made to bring forth a hundred fold. There are mines too, but they are not worked, and no encouragement is given to labour. Just as it was formerly in Egypt; but what a change took place in that country when Mohamed Ali encouraged European settlers! Why does not the sultan imitate his example in regard to Syria and Asia Minor." And if "it were known that there was a mutual understanding and treaty between the Porte and their own government, confidence would be established, and numbers would immediately flock thither."

"The hands of the Porte would thereby be strengthened, for large tracts of land would be thrown into cultivation, the exports and imports would increase, and a large revenue would flow into their coffers."

"If I mistake not, it is for the promotion of commerce as well as the safety of our ships, that surveys are taken of the coasts and ports of the Levant. Surely, then, it is legitimate in us to encourage our countrymen to settle where they can do so with advantage to themselves and the government of

the land they select; especially when, as in the present case, the said government may be said to depend upon the active co-operation of England for its existence, and ought to increase her resources by all the means in her power: how else is she to repel the aggressions of her enemies and maintain her position as a nation?

"Within a few years Beyrout and Alexandria have become prosperous, entirely in consequence of European enterprise. Civilisation is progressing, thanks to the powerful influence of steam, which induces many to lay aside their ancient prejudices. But Turks have not yet learnt to encourage their benefactors to settle amongst them, because they are of a different religion, otherwise the means would speedily be found for restoring many of their ancient ports in Asia Minor, as well as in Syria. Boats would again appear on the Orontes and introduce the arts of civilised life to the cities of the interior. Homs, Hannah, Damascus, Antioch and Aleppo, the plains of Messopotamia would again flourish, new cities would spring up, and the Ottoman empire would become the richest in the world."

"A more healthy place than Suediah it would, perhaps, be difficult to find. There are no malignant fevers; consumption, asthma, and bronchites are unknown. We never see sickly children, or paralytics. Let the weather be what it may, a cough is seldom heard, and a cold rarely lasts more than twenty-four hours. Death is really an event in Suediah, except from accident or age; for we are not often visited with epidemics; and we breathe a pure and invigorating atmosphere; we have no heavy dews or fogs; the temperature is equable, neither too hot nor too cold. The air is balmy and agreeable; the sirocco is not felt, as at Malta, Egypt, and other parts of the Mediterranean, consequently, our spirits are always good. In the summer there is generally a refreshing breeze from the sea, and the nights are

beautiful; and though there are fresh gales in winter, the wind is never cutting or irritating, and we very rarely see snow in the plains. We are too near the mountains to feel the effects of the snow, which collects on their lofty peaks. We always know what the weather is to be, and can depend upon it, and dress accordingly, for it is remarkable with what precision the seasons return. We have the early and the latter rains, as mentioned in Scripture; but we can calculate almost to an hour when the change is to take place. I have kept the register of the temperature and atmospheric changes, and I can truly say, that the climate fully justifies the practice of the ancient Greek and Roman physicians in sending their consumptive patients to Suédiah; and if the advantages to be derived there were more extensively known, it would soon be resorted to by invalids as formerly."

"The people are well disposed, industrious, civil and friendly. They belong chiefly to the Antioch Greek, or Armenian Church. There are about twenty Turkish families, some Ansayrees, from the mountains; but no Roman Catholics or Jews. We walk out at all hours alone and unarmed, and when we go to bed at night, we do not think it necessary to fasten either windows or doors: yet we have neither police, workhouses, nor soldiers; not even a beadle to frighten the boys into good behaviour. Still we have no beggars, and no one can say that the people are oppressed; they have few taxes, have always enough to eat, and appear contented and happy The necessaries of life are abundant and cheap; the roads are good, and for the most part overshadowed with hedges of pomegranates, myrtles, and other evergreens; also the fig, the wild grape, poplar, plane tree, the scented willow, clematis, convolvulus, and other creepers; the wild verbena, liquorice, thistles, roses, squills, and a variety of elegant little flowers decorate the banks; we grow oranges, lemons, apricots,

peaches, nectarines, plums, cherries, strawberries, the Indian medlar, apples, pears, the randigan or egg plant, potatoes, and a great variety of other plants, shrubs, and vegetables; asparagus and celery grow wild. There is a fine field for the sportsman, the naturalist, the historian, the antiquarian, and the astronomer.

"We lead a patriarchal life which I would not change for all the luxuries and gaieties of Europe.

"The habits of the people are simple, for they have not yet been corrupted by the inhabitants of cities. A spirit of enquiry has lately sprung up among the Christians. They evince a desire for improvement, but they have no teachers or schools which are worthy of the name. The priests permit the circulation of the Bible, but few can read or write their own language.

"They work from sunrise to sunset for two piastres (fivepence), most of them have a little farm or garden, cultivate the mulberry, and rear silk worms, reeling off the silk in the season, that constitutes the great wealth of the country. The goats, sheep, and cattle are driven out to pasture in the morning and home again in the evening; and the sheep follow their pastor and come at the sound of their names, and it is delightful as the purple shadows of the declining sun fall upon the mountain sides, to hear the peaceful tinkling of the sheep's-bell as they wind their measured way through the dells and along the shaded lanes, and crop the herbage on their banks. Early marriages are encouraged, and few that are married are without families."

"A father delights to have his children and grandchildren under his roof, and at his death his elder brother is regarded as the patriarch of the house, and he is looked up to as such. Parental authority is absolute: a son never questions the will or opinion of his father, and great reverence is paid to age, all rising on the approach of an old man, and

conducting him to the seat of honour. The coat of many colours presented to Joseph is still the national costume, and we are continually reminded of the days of Abraham, of Isaac, and of Jacob."*

The advantages of the port of Seleucia were placed before Government by Captain, now Major General Chesney, in 1832, (see pp. 63 and 64 of Euphrates Reports), and were subsequently advocated by that competent authority, Captain Allen, R.N. According to the latter officer, it is capable of being made one of the finest harbours in the world. Both these officers considered that from £20,000 to £30,000 would be sufficient to clear out the greater part of the ancient basin, and repair the massive works of the Romans, many portions of which require merely to be relieved from the mud deposited upon them. The importance of Seleucia will become apparent, when it is borne in mind, that there is no other port for commerce along the whole coast of Syria better than the open roadstead of Beyrout, or the pestilential harbour of Alexandretta. Seleucia is not only capable of being made a most efficient port, but, by a moderate additional outlay, the existing great Mole might be extended so as to form a harbour of refuge, large enough to protect at one time the entire mercantile navy of England.

Antioch is eighteen miles from Seleucia, and stands in the Valley of the Orontes, which here forms a fertile plain. From the beauty of the scenery, the abundance and the cheapness of the necessaries of life, and the salubrity of the climate, arrangements were at one time in contemplation for Sanataria and other establishments, for the benefit of invalids, especially Indian officers and their families.

Aleppo is forty-two miles from Antioch, contains a population of about 90,000, is one of the most opulent and best-

* Vide Letter by Dr. Holt Yates in Nautical Magazine.—Feb., 1851.

built cities in Syria, and the chief emporium for the trade of the country.

Ja'ber Castle, thirty-nine* miles distant from Aleppo, is on the Euphrates, and offers every facility for the construction of docks.

"The Euphrates gives a water communication with Syria, Asia Minor, and Asia Major, (their central parts,) also the South of Persia and Kurdistan."

"The Pachalic of Bagdad produces (and the greater part along the Euphrates), wheat, barley, Indian corn, rice, millet, honey, dates in great quantity, and other fruits, wine (from Kerkook and the banks of the Tigris), cotton, some silk, tobacco, gall-nuts, and wool in great quantity, from the different Arab tribes, each of which has extensive flocks; also ambergris, sal ammoniac, leather, buffalo hides, oil of naphtha, bitumen, saltpetre, salt, borax, and glass, made at Bagdad; where are manufactured coarse coloured cottons, and fine handkerchiefs of silk and cotton for the Arabs.

"Bagdad was the centre of a considerable caravan commerce previous to the late disturbances, when it sent annually even as far as Erzeroum, 2,000 mule loads of pearls, silk, cotton, stuffs, shawls, coffee, gall-nuts, indigo, &c., and still more to Mosul, Diarbekir, Orfa, &c., and to Aleppo even at this moment, from 3 to 6,000 animals yearly; but 80 years ago, this number was said to be 50,000.

"Bagdad, from its matchless situation, would, with the slightest fostering care, become a grand centre of English, Arab, Persian and Eastern commerce; and nothing is wanting to distribute it widely, and increase it greatly, but the establishment of steam.

* By railway, the entire distance from Seleucia to Ja'ber Castle is estimated at 80 miles.

"The imports to Bagdad are from the Persian Gulf: pearls and fish.

"FROM PERSIA: Silk, woollens (coarse), saffron, sulphur, nitre, dried fruits, shawls of Cashmere, Kerman and Yesd: stuffs, cotton, gum-rahabat, fur skins, tobacco and pipe sticks.

"FROM INDIA: Muslins, porcelain, indigo from Bengal, Guzerat, and Lahor; cottons, pepper, spices, cinnamon, nutmegs, Java and other sugars; musk, cardamoms, cotton and silk from the coast of Coromandel, aloes, camphor, &c.

"FROM TURKEY: Soap, cotton, linen, silks, embroidered stuffs, opium, and copper, about 450 tons annually.

"FROM ARABIA: Incense, myrrh, galbanum, resins, gums and other precious drugs, also Mocha coffee, in quantity across the Peninsula, to go on to Constantinople and elsewhere.

"FROM EUROPE, EGYPT, &c.: (A part across the Desert from Damascus, but chiefly by way of Aleppo.) Bagdad receives cotton twist, grey cloths, and prints, grey calicos, long-cloths, Greek-stripes, power loom sheetings, jaconets, cotton handkerchiefs (all English), fine French or German cloths; cutlery, lead, tin, and St. Domingo coffee, also indigo and cochineal, velvets, satins, taffetas, mercury and drugs.

"The chief outlets from Bagdad as a depôt are to Constantinople:—Cashmere shawls, aloes, ambergris, musk, pearls, coffee, tobacco, spices, pipe sticks, and Indian muslins.

"TO SYRIA AND ANATOLIA: Are forwarded silk, tobacco, shawls, gall nuts, coffee, stuffs, and drugs.

"TO PERSIA: Diamonds, rubies, emeralds, pearls, European stuffs, brought over the Desert from Aleppo and Damascus: also Aleppo cloths, coral, paper, jewellery, cochineal and indigo.

"TO ARABIA AND INDIA: Silver, gold, copper, dates, horses, and oil of naphtha for painting.

"Thus it appears that imports continue to a considerable

extent, notwithstanding all the difficulties and distance by which they are transported with caravans, and as there are pretty ample returns, it is evident that if ever the noble stream should be used instead of a caravan transport, there will be an increase and consumption proportionate to the comparative cheapness of the supplies, and the great facilities offered for placing depôts, by water, at every convenient spot: this done, a few years will most likely see the Arab's wants increased to something like those of other people; and in making larger purchases, they will discover how to reimburse the expense, by cultivating cotton, grain, wool, &c., more extensively than they now do."

"It is worthy of the consideration of Government, whether the proposed attempt should not be made, not only with a view to Mesopotamia chiefly, but the trade of Persia, now carried from Bushire to Erzeroum, more than 2,000 miles; whereas by attending to Erzeroum as one great centre, dependent on Trebizond and the inlets of the Euphrates and Karoon, we shall increase it prodigiously; and command the profits, which if neglected will flow into the coffers at Tiflis: where they are building extensive manufactories expressly to force goods into Persia, and attract its trade towards Russia."

"With this Power and her persevering endeavours to grasp at commerce, we can also compete, as regards Persia, by another line, viz., that of the Indus."*

The official returns of the existing commerce of Mesopotamia demonstrate that there is a prodigious and most promising field for investment. In the statistics of the ancient and modern commerce of these countries, contained in the second volume of General Chesney's work on the Euphrates Expedition, will be found ample materials for

* Report of Captain Chesney, in 1832, addressed to Sir Stratford Canning, G.C.B., Ambassador at Constantinople.

the satisfaction of our merchants, as a certain, rapid and extensive increase of trade.*

The following very recent traffic returns, prepared on the post, are also well worthy of attention.

DEAR SIR, *Aleppo, 12th February,* 1856.

I have the pleasure to acknowledge the receipt of your esteemed letter of the 10th ult., to hand on the 5th inst., the contents of which I duly note.

I have not yet quite finished the account of the trade and navigation of the North of Syria, as I am obliged to collect the information from my correspondents in different places, there being no regular accounts kept by the Custom House or any other Government authority. I have now, however, managed to collect nearly all the necessary details, which I am now engaged in arranging. And as I expect to leave this for England in ten or twelve days hence, I will have much pleasure in handing you over all the papers on my arrival in London, which I expect will be about the end of March.

I feel the greatest interest in the success of the scheme for opening up the Euphrates Valley, which will be of immense importance to this country, and cannot fail to be remunerative, as the trade of the North of Syria is increasing rapidly; and what it may amount to with regular and cheap commucation with the coast is hardly possible to be calculated, as the Railway will pass through a large extent of country with as rich a soil as is to be found in any part of the globe, and now lying utterly waste for want of any means of disposing of the produce.

The enclosed paper will show you an approximate calculation of the trade of Alexandretta during the past year, and enable you to form some idea of what might be the amount of business done, were the resources of the country properly

* Pp. 674—686, Vol. II., of the Expedition to Euphrates and Tigris, by General Chesney.

drawn out by means of easy communication. At present there are no roads adapted to wheel carriages whatever in this country, and the only means of transporting goods is by camels.

Expecting the pleasure of seeing you soon in London,

I remain, &c., &c.,

W. P. ANDREW, Esq. (Signed) JOHN KENNEDY.

20,480 Bales, Manufactures,	per bale,	£20	0=	£409,600	0
878 Barrels, Sugar,	per barrel,	5	0=	4,390	0
534 Bags, Coffee,	per bag,	4	10=	2,403	0
325 „ Pepper and Pimento,	per bag,	3	10=	1,137	10
97 Cases, Cochineal,	per case,	30	0=	2,910	0
48 „ Indigo,	per case,	100	0=	4,800	0
1,231 Barrels, Drysalteries,	per barrel,	3	0=	3,693	0
5,252 Packages, Sundries,		3	0=	15,756	0
				£444,689	10

The above is a correct list of imports from the United Kingdom. I have no means of ascertaining the French, Italian, and coasting trade, but calculate from the best information that the trade with England in imports, is fully one-third of the whole. This will make the value of imports last year to exceed one and a quarter million pounds sterling.

Approximative note of goods exported from Alexandretta in 1855.

120,000	Quarters, Wheat,	£2	0	=	£240,000
50,000	„ Barley,	1	5	=	62,500
25,000	„ Millet,	1	5	=	31,250
5,000	Tons, Sesame Seed,	12	0	=	60,000
750	„ Galls,	70	0	=	52,500
1,000	„ Cotton,	30	0	=	30,000
2,000	„ Wool,	40	0	=	80,000
	Flour				150,000
Allow for Madder Root, Scammony, Yellow Berries, Gums, Boxwood, &c.					100,000
					£806,250
Allow for Coasting Trade					233,750
					£1,040,000

Say, total value of exports, one million pounds sterling, perhaps rather more, as I have calculated some items perhaps less than actually exported.

Large amounts of specie are also exported in groups, and no allowance is made above for cocoons, reeled silk, and olive oil, which are exported largely.

There are still some of the articles named on the previous page about which I have not yet procured reliable information. These rough notes may give some idea of the trade; and tables as correct as possible will be made out for the years 1852, 53, 54, and 55.

(Signed) JOHN KENNEDY.

Mr. Kennedy states in another letter of recent date that, he bought some two or three months ago, a quantity of wheat in a district two or three days' journey to the interior of Aleppo, for which he paid equal to 9s. a quarter, and carriage to the coast *alone* cost upwards of 17s. 6d. a quarter. This item of expense being nearly double the first cost.

The "Times" of the 14th October, 1856, in the City Article, gives the following digest of the trade returns of Syria and Mésopotamia.

"A new series of reports on the trade of various places from English Ministers, Consuls, and others has just been issued by the Board of Trade. Those which relate to Turkey are from Aleppo and Broussa, and, as the projected Euphrates Railway is to pass the former city in its route of 80 miles from the Mediterranean to the river, the facts in connexion with the commerce of that district are likely to attract much attention. The progress of the place during the past five years and the magnitude of its capacities appear to be extraordinary. As far back as 1851, according to statements from Mr. Acting-Consul Barker, there were signs of a considerable development of trade, and the tendency was rapidly stimulated by the war. In imports, British manufactured goods amount in

quantity to about two-thirds of the whole trade of Aleppo. In value they are about one-third. Five years back this value was £146,405. Last year it was estimated at £471,353, exclusive of specie, which has been largely absorbed in the interior of Mesopotamia. As regards exports, the return for 1854 shows a total of £993,630, which has risen in 1855, to £1,254,130, of which about £450,000 consisted of wheat flour and grain, while cotton and wool were also important items. The export trade in grain has been encouraged by the high prices prevalent in Europe since 1851, and in a still greater measure by the demand for the allied armies at Constantinople.

"In relation to the capacity of the country to pour forth continued supplies, it is stated that nothing is wanted but effective means of transport to the coast to enable the whole of Mesopotamia to furnish incalculable quantities at prices below those of the ports in the Black Sea. At the end of March last, more than 50,000 quarters, belonging to different purchasers, were remaining in store to the east of the Euphrates, while there were still above 100,000 quarters for sale, and which were not taken, owing to the want of means of transport to the Mediterranean. Last year the rate of carriage from Aleppo to Alexandretta (one of the Mediterranean ports open for selection for the terminus of the Euphrates Railway) averaged £1 2s. 5d. per quarter for wheat, and £5 per ton for goods, while the price of wheat in Aleppo was only from 25s. to 30s. per quarter, and of barley 11s. to 14s. Several years back, as soon as the demand for Europe admitted of exports being made at a profit even in the face of these enormous charges for land-carriage, the Turkish government removed the restrictions which had previously existed. 'Before a year had elapsed,' says Mr. Baker, 'hundreds of animals, camels, horses and asses were seen day and night conveying grain to

the coast, pursuant to contract. The succeeding year a still greater number were engaged in this business, and there is no doubt, were roads made, that the agriculture of the whole of the interior would increase so rapidly that the produce would be sold at very remunerating prices."

"It is further pointed out that there are now no trading restrictions to interfere with this state of affairs; that Alexandretta is practically a free port; that Aleppo is the emporium of the whole of Mesopotamia, Bagdad, Persia, and the south of Arabia, and the link of communication between those countries and the Mediterranean; and that the only things requisite to develope the wonderful capabilities thus presented are carriage roads, railways or tramways to the coast, and a reform of the Turkish currency, which tends to embarrass every transaction, especially those depending upon a system of contracts. *When it is considered that the proposed Euphrates Railway will not only supply all the facilities demanded, but is to shorten the journey to India by almost one-half, the changes impending in the destinies of this region, the early prospect of which is one among the salutary results of the war, will appear to claim greater attention, commercially and politically, than any at present to be looked for in other quarters of the globe.*"

That the same political and social events and topics recur at stated intervals in the world's history, with the regularity of comets, varied only in their phases by the progress of society since their last appearance, is as true now as when propounded by the great historian of Greece, in introducing his immortal history of the Peloponesian war. Now, as did our far gone ancestors, are we of the nineteenth century discussing the same social, political, and even geographical problems, that were battled over in the days of the Reformation, varying our views and our arguments no doubt according to the increased light which science and

learning and enterprise have cast on them, but still making the self-same problems our texts, as much as if they were as novel as when first propounded in the schools of the middle ages. Take, for instance, the mixed problem of the quickest route to the Indus—this, the great social, political, commercial and geographical problem from the days of the Ptolemies, is the problem of to-day. The course by which the problem is to be solved is, no doubt, changed by the progress of enterprise and discovery. We neither seek for that route by the Cape of Storms, nor by the Northern Ocean, but still the problem remains the same, not only in its general bearings, but in the interest it possesses in the public mind of every nation of Europe, and especially of England.

"Like every other mixed question, the shortest route to the Indus is constantly receiving solutions, for the time apparently final, but as certain to be superseded in a due course of the world's progress by some one more perfect, and therefore again apparently final. Such in an especial degree was the overland route by way of Egypt, which now stands in imminent jeopardy, if not in certain danger of being ere long superseded by another overland route by the way of the Persian Gulf;—and this at the moment when the near approach of the construction of a railway, if not of a canal, through the Isthmus of Suez, bid fair to make us believe that at last the Indian highway problem had been solved.

"At the present moment two solutions of this all-popular problem are offered to the world—the one astonishing for its magnitude and costliness: the other equally attractive from the very contrary qualifications—the one proposing to run 5,000 miles of railway direct through Europe and Asia, despite every difficulty that man and nature can offer; the other content to make a great stride towards the desired goal, by the simple construction of some eighty miles of railway, over

a level country, through the territories of a friendly power, and under every encouragement that its Government can give to an enterprise so largely beneficial to its purpose. The gigantic scheme proposes to follow the course of the crow, with an iron road from London, through Belgrade, Constantinople, Tartary, Ismid, the valley of the Sakaria river, to Sevri Hassar, and then on by Ak-Serai and the Kurin mountains. Emerging thence, it would strike the head of the Euphrates Valley, and working almost parallel to the river course, pass to the west of the Singar Hills to Bagdad and Bassorah. To attain only thus far, which would still leave 1,100 miles of line to be run through Persia, and the wilds of Beloochistan, above 1,000 miles of the highway has yet to be laid in Europe, and at least 1,300 more to be constructed in Asia. That such a project could be carried out is no doubt within the bounds of possibility, though quite out of the verge of common probability. It is possible for Austria, Belgium, France, Turkey, Persia, and even the wild tribes that border on the latest annexations of North-Western India, to enter into a general railway alliance and complete this iron-highway. And it is certain that if they will do so, that for a *consideration*, English capitalists will find the money, and English engineers will find the talent, and English manufacturers, if need be, will find the materials for thus bringing Calcutta within a week of London. But to suppose that such a project can be worked as a commercial speculation is absurd. Whilst to expect that it should be realised as a political movement passes the credulity of spirit-rapping."

"The less ambitious, and therefore more practical and profitable project, is put forward by Mr. Andrew, who is so well known to all who have interested themselves in the promotion of railways in India, as 'The Old Postmaster,' and chairman of the Scinde Railway. As explained in his valu-

able work, it is so clear in its advantages and so simple in its details, that it will require but few words of comment from us. It is no new line of country that he proposes to take, but one that was carefully surveyed by Colonel Chesney, of Euphrates notoriety, as far back as the days of William IV., and afterwards by two members of the Indian Navy, Captain Lynch, C.B., and Commander Campbell. All these authorities agree that there are no serious engineering difficulties to contend with, or as it was phrased in the Westminster Epilogue—

'Omnia plana
Nil quidquam dignum, nomine colliculi.'

"This fortunate bit of country, which is to be made the connecting link in the great chain of Indian communication, stretches from the old port of Seleucia on the Mediterranean, by the towns of Antioch and Aleppo, to a point on the Euphrates call Ja'ber Castle, whence the stream is navigable for more than 700 miles to Bassorah, at the head of the Persian Gulf. The whole distance is no more than *eighty* miles, half of which is a dead level, and the rest of a character most favourable to railway works."

"But its effects on the Indian problem are by no means commensurate with its own apparent proportions. By this bit of a line—which beginning at a port on a great sea and ending at the head of a navigable river on a greater ocean, is of itself, and by itself, a complete, perfect, and profitable enterprise—not only will a new country be opened up to European enterprise, but a directness in the route to India obtained which few would believe who do not work it out on the map. Taking the line of the Austrian railways to Trieste, thence by steamer to Seleucia, thence by rail to Ja'ber Castle, down the stream to Kurrachee where the Scinde Railway commences the future net-work of Indian lines, the traveller will follow a route as direct as any

railway can be expected to afford, in the construction of which financial, as well as political, considerations have been preferred to the temporary *eclât* which some originators seek to obtain by the disregard of these very necessary and very useful points. Eight days and six hours will take the traveller through Trieste to Seleucia, thence the railway will take him in three hours to the head of the navigable waters of the Euphrates. Three days and three hours more will see the river voyage completed to Bassorah; and three more days—making in all fourteen—bring the traveller to Kurrachee, where the Scinde Railway keeps the western door of the railways of our Indian empire.

"Like most of the other railways for which India is indebted to Mr. Andrew, this Seleucia to Ja'ber Castle line, though complete in itself, is regarded by him as the parent of further lines, whose construction will depend on the success of the parent line, and will gradually lessen the distance between the Mediterranean and the Persian Gulf. Thus he would extend his works by degrees along the valley of the river to Phumsah, the ancient Thapsacus, cross thence into Mesopotamia, working down the valley by Anah and Hit to the environs of Bagdad, and thence, by Babylon and Hillah, to the point where the Tigris and the Euphrates join, and the united stream becomes deep enough for steamers of the largest size. Other branches, too, might tap the Persian Gulf at Schuster, or at Bassorah, where the trade is extensive, and the accommodation for ships of large tonnage already ample.

"Important as this valuable little link in the great Indian chain is to us, because it is a link, as a separate and a local line, its importance to the Turkish Government, and its effect on the well-being of the races that inhabit the country through which it will pass, cannot be exaggerated. The Turkish Government, therefore, do right well in extending

to this project their most active patronage, in not only giving the land free, and placing every facility they can command at the call of its promoters, but in securing its immediate construction, by offering such a minimum rate of interest as will ensure the immediate subscription of the capital, irrespective of the future profits of the enterprise. Such is the latest, and till balloons are brought under whip and bridle, the final, solution of the time-honoured problem of the shortest route to the Indies."*

"Now that a new era is to begin for Turkey a new and higher principle ought to be likewise adopted in her international relations with Europe.

"This principle is that of mutual interest, and its standard-bearer ought to be England, for no other country has so many reasons for establishing this principle. There is scarcely a point on which the interests of Turkey and England come into collision, and no other country is more interested than England in the developement and prosperity of Turkey. England has no need of privileges and exclusive advantages; on the contrary, the freer the intercourse, the more unlimited the competition, the surer is England to succeed. Turkey has need of capital and industrial enterprise, which abound in England. Turkey has raw produce, which could be increased tenfold, and for which she could find no better market than England.

"It is these mutual wants and mutual advantages which, believe me, people in this country are beginning to appreciate, and which ought to guide England's policy in Turkey. It would by degrees establish that firm and legitimate influence which seems far preferable to momentary triumphs, and is entirely independent of the fall of Ministries and the disgrace of favourites.

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* "Bell's Weekly Messenger."

Every step which leads in this direction ought to be hailed with approbation. Among the countries through which the railway is to run, Mesopotamia ought more especially to attract the attention of Europe as admitting of the greatest development. "Up to the last few years the government of Bagdad was one of the most thankless and seemed one of the most hopeless. For the last four years this has been entirely changed by the exertions of one man. It is so rare to find a Turkish official who really does his duty, and who thinks of his province more than of his pocket, that every one of them ought to be known. Mehemed Redschid Pasha, the present Governor of Bagdad, is one of these. Formerly Grand Master of Artillery, he made himself most objectionable by his economy and strict vigilance in money matters. He was in consequence of this removed four years ago to Bagdad. This province, exposed as it was to the incursions of the Arabs under Persian rule, and to the migrations of the Arabs of the Great Desert, is as of old, in charge of a Governor who unites civil and military power, and enjoys a greater independence in the administration of his pashalic than any other Governor. This position, of great advantage in the hands of an energetic man, became a source of ruin under a succession of incapable and dishonest officials, so that when Mehmed Redschid Pasha arrived he found everything in decay. The revenue had fallen off to 1,600,000 piastres, the country was infested on all sides by the incursions of the Persian Arabs, all the silk manufactures, which had formed one of the chief sources of prosperity, were fast falling off, and every year the desert was encroaching on the cultivated ground. All this he has succeeded in remedying in four years. The Arabs are kept within their bounds, the revenue has more than doubled, and Bagdad, which had been obliged to import silk manufactures from Aleppo and

Persia, is now beginning to supply the border countries with tissues of an exquisite taste."*

"I told you long ago that this project (the Euphrates Valley Railway) was above all popular among the Turks—among the mass of them, because it struck their imagination, and among a few, because they saw its immense importance for the development of the country through which it would run."

"In a collossal undertaking like the Euphrates Valley Railway, running through a country comparatively little known as to its real resources, calculations can, of course, not be made with the accuracy which can be obtained on other railways; but still some approximate estimate of the probable traffic can be obtained, and this is certainly rather in favour of the line paying. In order to effect this, it would seem necessary to have the local traffic as much in view as the through traffic to India. It is a well known fact that it is never the latter, but the former which pays. With this view kept before one, it is of the highest importance to touch as many intermediate points as can be done without lengthening the line too much. This can be done so much the easier as there are comparatively few established centres of commerce on the line, and as they are so situated that by following them as nearly as possible, physical obstacles are at the same time avoided. The company seems to have understood this point, and General Chesney was enabled to lay before the commission approximate estimates of the traffic of the different places and of the probable increase in the traffic, the chief difficulty of which lies in the defective means of transport. Another point which ought not to be overlooked is the gradual construction of the line; and the project of the company to make, in the first instance, only the line from

* Constantinople Correspondent vide "Times," 2nd July, 1856.

the Euphrates to the Mediterranean has been made with that view. The idea is so much the more happy as this line will touch the natural high road from the interior, which has been adopted for centuries. A gradual construction of the line will likewise help to overcome the prejudices which might exist in those countries against railways or any other innovations, by showing the advantages which will be derived from them for the producers. The greatest difficulty will begin when the railway comes within the *rayon* of the Bedouins. In this respect the Turks are anxious that the line, if possible, should be constructed on the left bank of the Euphrates. Two objects would be gained by this—first, the railway would run nearer to the commercial centres, which are nearly all situated on the Tigris; and, secondly, the guarding of the line would be much easier."*

A recent number of the *Journal de Constantinople* has an article on the connection of Bagdad with Bussorah by water transit, in which the following passages occur:—"The Imperial Government, as we announced some time back, has prepared a decree ordering the purchase of two steam-vessels for the purpose of establishing a communication between Bagdad and Bussorah. The consequences of this measure, which has just obtained the imperial sanction, are immense. Before, however, entering into an examination of the question with regard to its commercial and political aspects, it will be necessary to cast a rapid glance at these two cities, situated on the confines of the empire, and get materials for a judgment as to their future capabilities by considering their present condition.

"The population of Bagdad may be estimated at from 75,000 to 80,000 inhabitants—Mussulmans, both Sunnites and Sheeahs, Jews, and Christians of different Oriental sects.

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* Constantinople Correspondent, vide "Times," 15th Oct., 1856.

The followers of Ali (Sheeahs) have a majority, but as they themselves are treated with great kindness by the Imperial Government (which is Sunnite in its faith), their dissent from the established religion has the effect of rendering them tolerant to the Jews and Christians. The small number of Europeans settled at Bagdad enjoys, thanks to this toleration, unbounded religious and personal freedom, which has never yet been disturbed by any act of fanaticism. We may rest assured that from Bagdad to the sea the population of Arabia, the fixed as well as the Nomade tribes, is not tainted with fanaticism. This is what distinguishes them from the Arabs of Barbary and Syria.

"At Bagdad religious toleration is established so firmly as a national habit that the government is strong enough to permit the public celebration of the Sheeah worship, and even processions on the days of Persian *fetes*. This politic mode of proceeding has the effect of attracting towards the city numerous Persian caravans. As many as 200,000 persons have visited the city in this way in the course of a year.

"As the local government gives all kinds of aid and protection to those pilgrims who wish to visit the tomb of Ali at Nedjef, that of Hussein at Kerbela, and the various mausoleums of the Imaums whom the Sheeahs hold in pious reverence, they put their pilgrimage to a double purpose, employing it for commercial as well as religious purposes. The arrival of the caravans at Bagdad is looked for every year as a period when trade receives a new impetus. The Persians bring shawls, silks, carpets, arms, &c., and receive in return the produce of the country, European goods, and colonial productions.

"The streets of Bagdad are narrow, and the bazaars are covered. The houses are built of baked brick. On the upper story the connecting material is clay. The *res-de-chaussée*, or rather (we may call it), the lower floor, for it

sinks several steps below the surface, is vaulted, and cemented with plaster and chalk. These cellars, called serdap, are the ordinary habitations of the population during five months of the summer. The nights, so superb in these latitudes, are passed on the terraces. These terraces, on account of the dryness of the wind and the absence of dew, form most delightful abodes The rooms of the floor are inhabited during the rest of the year. In winter, in the month of January and February, a fire is endurable, for though there is no frost, the cold makes itself felt.

"The city is divided into two nearly equal parts by the Tigris (Chatt-el-Didjle). A newly-built bridge of boats unites the two banks." "There is a wind blowing almost constantly from the north during more than three quarters of the year. This wind, by moderating the temperature, is of great sanatory use to the city and the environs. Since the present governor-general, Méhéd Réchid Pasha, has had a dyke constructed to prevent the overflow of the Euphrates through the ancient canal of Saklawiéh, which formed, before its conjunction with the Tigris, an immense marshy lake on the north-east of Bagdad, the sanitary state of the city and the surrounding country has been remarkably good. The governor-general signalised his entry upon the duties of his appointment by this work. Since that time the marsh has been drained and the fevers have disappeared." "The waters of the Euphrates in regaining their normal course flow into the ancient canals used for irrigation, and into the new canals which the governor-general has had constructed in the environs of Babylon. The effect of this has been to restore fertility to the country, and the cultivation of the land has experienced an immediate development.

"The interminable plains which surround Bagdad and Babylon consist of alluvial earth. They form a parched desert when not irrigated; but if a mere slender stream of

water were brought from the Euphrates or Tigris they would be turned into luxuriant gardens. No country is more favourable than this for the construction of canals. It is flat and free from undulations. The clay bed of the river transmits the water without being permeated by any portion of it, and the spade and the plough are never interrupted in their course by a stone or flint. On every side we come in contact with the gigantic works of men of old. We are surrounded with ruins, with dried-up beds of immense canals, extensive ramifications of a complete and scientific system of irrigation. These ruins open a vast field of study for modern engineers. This is the spot above all others where we can arrive at the comprehension of the agricultural effects of an abundance of water, and a high temperature.

"Two rapid rivers run through the whole country. What use has hitherto been made of these?

"The Tigris is navigable from Diarbekir, but only for rafts constructed of limbs of trees buoyed up by inflated skins.

"These barges carry travellers and goods as far as Bagdad, but are at the mercy of the current. At Mossoul (Nineveh), half way, we see these rafts built on a larger scale, the river from there to Bagdad being wider and more rapid. When they arrive at their destination the rafts are broken up, the wood sold, and the skins carried back to the place from whence they came by mules, ready for use in another voyage.

"From Bagdad southwards the Tigris is navigable for ships. A war steamer belonging to the English East India Company conveys the mail from there to Bussorah. The two steam vessels which the Imperial government has ordered to be built will render the navigation of the river safe." "Everything gives us reason to hope that this is only a commencement, and that very soon the merchants of Bagdad, enlightened by useful experience, will increase the number

of steamers. The Imperial government has taken the initiative. Private industry must follow in the same direction.

" The Tigris has several shallows. The navigation in consequence is sometimes difficult in summer. Vessels drawing no more than three feet of water can pass in all seasons. No very extensive operation will be necessary to remove these obstacles, which even in the present state of things are easily surmounted."

" This project of a commercial road, uniting the Mediterranean with the Persian Gulf, is not Utopian, and deserves to be taken into serious consideration by the Imperial government."

" The Tigris and the Euphrates, by their union at Kurnah, form the Shut-el-Arab, a magnificent river, perfectly navigable throughout to the sea. The great steam vessels of the East India Company have often been seen at Kurnah by the astonished Arabs. The native pilots have been tutored by the English, and are as good as could be desired in a country in which maritime and commercial relations have to be established anew. From Kurnah to the sea, a distance of about forty leagues, the river is bordered almost without interruption by forests of date trees, the sole product of the soil in this part of the province. We are led, however, to ask what it might not produce, when we reflect that even at Kurnah the tide is perceptible, that at Bussorah there is a fall and rise of seven feet on the average, and that twice a day the country is irrigated with soft water, which leaves behind it a fertilising mud. Man therefore has nothing to do here but to prepare the earth for production. Nature takes upon itself the charge of irrigation, and the climate is such as to cause the plants of Europe and India to develop a vigorous and almost incredible vegetation.

" The sugar-cane, flax, hemp, indigo, the blackberry, the banyan, rice, the vine, in short, all plants flourish. Nothing, however, is cultivated, with the exception of the date, which

requires scarcely any care, and which, when once planted, lives for centuries."

It is gratifying to find, that not only in England and Turkey, but that in India the public mind is freely aroused to the magnitude of the results that must flow from improving the means of intercommunication between the East and the West.

The *Bombay Gazette*, of recent date, has the following :—

"We cordially second the proposal of our Kurrachee friends for a weekly Mail communication between India and Europe; but the Euphrates route is clearly the line for them. It is a saving of eight hundred miles between Scinde and Malta; through one of the most fertile countries in the world; a part of the world, too, where it is most desirable that British influence should be felt by rulers, and favorably known among people. Every now and then, it is true, we hear of there being grave objections to the Euphrates route, sometimes they are geographical, sometimes political, but never insurmountable; and to our clever countrymen in Scinde we are sure the difficulties would be as nothing, if they took the thing in hand."

The trade of Turkey-in-Europe, Asia Minor, Mesopotamia, and all along the proposed line of Bussorah, is of great importance, and only requires a ready means of transit for its rapid development. The success of the English and Austrian Steam Companies on the line between Constantinople, Smyrna, and the coast of Syria and Egypt, is a strong proof that the resources of these countries merely require an outlet. The Mahommedans are now quite alive to the importance of rapid locomotion—be it by railway or steamers. The tedious mode of transit by caravan is nearly at an end, whenever a quick mode of transport is available.*

* M.S. Notes of Lectures delivered before the Imperial Academy of Vienna, by Dr. J. B. Thompson.

We have seen that it is computed that 200,000 pilgrims pass yearly along the route of the Euphrates or Tigris to visit Bagdad and other Holy Cities; and reference here may be made to the tabular statement of traffic, on the next page, by a Bagdad merchant.

The comparison of the imports and exports of the ancient trade, with these countries, is very striking, and the more modern statistics of our trading with the East during, and subsequent to the existence of the Levant Company, are equally important, and should be sufficient to satisfy us as to the value of the great field open to our commercial enterprise.

These countries are rich in minerals, but have as yet been only partially explored with a view to their development.

The importance of a railway from the Mediterranean Sea to the Persian Gulf will be still more apparent, when it is estimated in conjunction with the commercial advantages to be derived from the four great rivers of Western Asia. "The elevated plateau which extends from the base of Mount Ararat into Northern Armenia, Khurdistan and part of Asia Minor, contains the sources of four noble rivers, having their estuaries in three different seas; and thus from Armenia as from the centre of a great continent, giving an easy communication to the nations of Europe and Asia." A reference to a map will show, "that by following the Kizil Irmak through Asia Minor, we reach the Black Sea, from whence there are inlets to Russia, Austria, Turkey, &c. In the same way, the Aras, by terminating in the Caspian, opens several routes towards Great Tartary, as well as towards the rest of Central Asia and China: while the Tigris and Euphrates, with their numerous ramifications, afford abundant means of communicating with Persia, India, Arabia and the Continent of Africa,"* and offer channels for a very extended consumption of British manufactures.

* Vol. I. of Expedition to the Euphrates and Tigris.

Approximate estimate of the Population, Yearly Traffic, &c. for the Euphrates Valley Railway, by a Bagdad Merchant.

Names of Places.	Population.	Imports.	Exports.	Remarks.
		Tons of Merchandise.		
Antioch	27,000	15,000	8,000	A passing trade.
Danah	2,000	14,000	14,000	" "
Aleppo............	85,000	34,000	20,000	
Gibbool	1,500	....	....	
Orfah	15,000	20,000	18,000	To which place the route as far as Bales would be open *i. e.* within 25 miles of Orfah.
Dair..............	7,000	15,000	12,000	Caravans from Syria and Damascus pass through this place on route to Bagdad and Persia.
Anah	2,000	500	....	
Hit	3,000	300	700	
Kathemain	8,000	8,000	....	This city is sacred to the Persians and Sheah inhabitants of Bagdad, who daily visit it to the number of about 3,000.
Bagdad	87,000	15,000	7,000	There is a large tobacco trade through Bagdad between Persia and Syria, about 1,000 tons annually.
Hillah Babylon, &c.	4,000	1,500	400	
Kerbelah	7,000	1,800	....	A sacred city of the Sheah Mohammedans, visited, as well as Meshed Ali, by upwards of 100,000 pilgrims who would proceed by rail to Syria for the Hadj, should such a route be available.
Meshed Ali	12,000	1,800	....	
Kiffil	3,000	200	....	The supposed tomb of Ezekiel, and a place of pilgrimage for the Jews.
Semawah..........	12,000	....	....	
Suk-i-Shukh	8,000	3,000	2,000	A very large trade is carried on between this place and Central Arabia. Two caravans, about 2,000 camels each, leave it annually.
Zobair	7,000	1,000	700	
Bussorah	12,000	25,000	18,000	Besides the traffic from India through Bussorah, upwards of 35,000 pilgrims pass through annually for Meshed Ali.
Quait	9,000	25,000	18,000	

The charge for merchandise down the river from Bagdad is about £1 0 0 per ton, measurement or dead weight.
" " up " to Bagdad " 3 0 0 " "
Goods are carried by camels at, it may be taken, for every 100 miles 1 10 0 " weight.
Mules " " 2 0 0 "

"Who is to say" (wrote the late Dr. J. B. Thompson some years ago), "but that even in our own day we may not hear of excursion trains to Palmyra, Bagdad, and the Tigris, by the great Eastern Orontes and Euphrates Valley Line of Railway, the stupendous aqueduct of ancient Seleucia forming a terminus, with branch lines to Baalbeck and the Plains of Issus—The battle-field of Alexander and Darius."

One of the happiest results of the war in the East, after the restoration of the Christian races to their rights, will undoubtedly be the opening of the country to commerce, colonisation, and intercommunication. The presence of Western settlers and merchants will constitute almost as novel a feature in the new state of society as will a regiment of Armenians or Kurdish Nestorians. The removal of all obstacles to the purchase of land by foreigners, the establishment of a sound financial system, and of guarantees for the security of capital invested in railways, roads, or harbours, will be the diplomatic labours that must ultimately be productive of the greatest results. A rich and unworked land is before us, and the industry of the West may go in and possess it. The contemplated railway from Belgrade to Constantinople will bring Turkey into connexion with the other states of Europe. It is to be hoped that quarantine—that obsolete police resource of despotic goverments—will be done away with, and that Turkey will no longer be placed by such absurd regulations without the pale of European Society. Beyond Constantinople all is new and almost virgin land. The resources of Asia Minor for soil and pasturage, for timber and other vegetable products, and for its valuable minerals, cannot be over-estimated. The Taurus reveals within its mighty ramparts untold treasures. Syria and Mesopotamia lie at its feet, teeming with untilled and uncared-for capabilities. The valleys of the Euphrates and the Tigris only want the presence of man to gladden and cheer the onward course of their magnificent floods. Myriads

of acres of rich alluvial soil pant for the plough to expand their far-spreading harvests to a noontide sun. The great nations of antiquity would be revived on the land of their birth, and the seat of the dispersion of mankind would become a centre of reunion.

That facility of intercourse creates commerce, and commerce carries with it civilisation, is an axiom founded on universal experience, and this applies itself in the East alike to the opening of Asia Minor, to the valleys of the Euphrates and Tigris, to a new route by the Dead Sea, or to a transit by the Isthmus of Suez; but, from the smaller extent of countries affected, in a minor degree to the two last schemes.

The junction of the Mediterranean and the Red Seas by a navigable canal—a project which appears in our days, thanks to the exertions of M. de Lesseps, to be assuming the aspect of a reality—is an undertaking, the utility of which has attracted the attention of all the great men who have reigned in, or conquered, Egypt; Sesostris, Alexander the Great, Julius Cæsar, the Arab conqueror Amru, Napoleon I., and Mehemet Ali.

The great question is the practicability of the undertaking. M. Lesseps tells us that the report of the engineers replies triumphantly to all objections respecting the sands of the desert, the alluvial deposits at Pelusium and Suez, and the navigation of the Red Sea. If this is the case, how does it happen that a project so feasible upon superficial contemplation, and which has been entertained by all the great men who have reigned in or conquered Egypt, has never been carried into execution? It is true that a canal communicating with the Nile was in existence in ancient times, but has it not also three several times been encumbered if not obliterated? Firstly, about the middle of the ninth century before the Hegira; secondly, about the fourth century before the Hegira; and thirdly, about 130 years after the Arabian

conquest. Upon the question of the navigation of the Red Sea we entertain but one opinion, which is, that it presents difficulties, obstacles, and inconveniences of a very serious description, and that are not met with in the navigation from Bombay or Kurrachee to the Euphrates. Again, with railways from Hyderabad (in Scinde) as from a centre, the Punjaub, Delhi, and Calcutta, as well as Bombay, are brought infinitely nearer to Europe by the Persian Gulf and the valley of the Euphrates than by the Red Sea.

We wish well to the project of M. Lesseps; there cannot be too greatly increased facilities of communication in any direction; those who uphold the contrary, must be weighed down by prejudices which they labour under in common with Jesuits and Japanese. There is room in the East for many lines of intercommunication, and the existence of any, or of all, would only tend to contribute to the preservation of the Ottoman Empire, to the cementing of alliances among nations, and to the opening of commerce and advance of civilisation among remote and unbefriended countries and people.

One of the most curious suggestions made in modern times, when growing intercourse is seeking for improved channels of communication, is that of Captain William Allen, who proposes to open a canal between the Mediterranean and the Red Sea, first from the Bay of Acre across the plain of Esdraelon to the valley of the Jordan, thence by the Dead Sea to Ghor, and finally by the Wadi al Araba to the Gulf of Akaba.

"In order to ensure the success of the project as far as human means can conduce to it, we must first obtain a thorough knowledge of the localities by careful survey—a thing which has not as yet been done—but Captain Allen has accumulated sufficient data to enable him to estimate that there would be a fall equal to 1300 feet, and that thus a communication once established between the two seas and

the Dead Sea, the current would carry off all the earth (previously loosened by blasting). We suppose the captain means here the current that would be established on letting the water into the depression of the Dead Sea, for the difference of level between the Mediterranean and the Red Sea being only some two and a half feet, it is evident that when once the depressions were full of water and an equilibrium was established, there would be no more current than in the projected canal at the Isthmus of Suez."

To return to the more immediate object of this memoir, we may mention a few particulars regarding the port of Seleucia, not before alluded to.

When Captain Allen examined the condition of this port, with a view to its restoration, he found the outer port to be actually useless, being nearly filled with sand washed up by the sea; the inner port, or basin, partially silted up by deposits brought by torrents from the mountains, and the canal of communication nearly filled with silt and boulders. The great culvert, 1000 yards in length, traversing the solid rock, in one place with a depth of cutting 150 perpendicular feet, and which has so excited the admiration of travellers, almost perfect, and the west wall, the only part of the circuit of the basin which is not bounded by rising ground, also but little injured.

The basin is 2000 feet long by 1200 feet wide occupying an area of 47 acres, in fact, as large as the export and import basins of the East and West India Docks together.

The advantages to be derived from opening this port have also been carefully summed up in the work called "Lares and Penates; or, Cilicia and its Governors," p. 269. These are, that the port and bay of Antioch are nearer at hand than that of Iskandrun or Alexandretta; that it saves the difficult navigation of the Gulf of Issus; that whereas Alexandretta has been regarded as one of the most unhealthy spots on the

coast of Syria, and hence few can be induced to reside there, Seleucia is a comparatively healthy place, and would, if opened to commerce, soon become in all probability a flourishing town; that the road from Seleucia to Antioch, Aleppo, and the Euphrates, is comparatively open, while that of Alexandretta has to cross the formidable Syrian gates—the mountain pass of Baylan (ancient Erana)—between Amanus and Rhosus; that while Cilicia is too frequently disturbed by local dissensions and the rebellion of races, the neighbourhood of Seleucia, chiefly tenanted by peaceful Christians, is remarkable for its tranquility and security; and lastly, Seleucia would constitute the safest harbour (especially for steamers) on the whole coast of Syria, and would from that circumstance, and from its greater proximity to Antioch and Aleppo, entirely supersede the ports of Bayrut, Tripoli, and Latakiyah. The same circumstances that have existed since the period when it was adopted as the site for landing the steamboats and equipments of the Euphrates Expedition still exist; and at a very moderate outlay Seleucia might be again rendered what it once was—the most capable, the most flourishing, the most populous, the most beautiful, and the most healthy port of Syria. As to the effect which the opening of such a port would have upon the commerce of the interior, and the promises it holds out as the key to North Syria, the Euphrates, Mesopotamia, the Tigris, Kurdistan, and Persia, and the line of communication that could be opened by this route to India, they are now known to the Turkish and Indian authorities, the British government, and all concerned or interested in the amelioration of the countries in question, in the progress of commerce, and the general advance in civilisation.

"It may be asked," says Captain Allen, "why I propose to construct, or rather to reconstruct, a harbour on a coast where not only there is no commerce, but where there is

even a very small population, in scattered and poor villages. Although this is but too true, the original and natural elements of prosperity, which in former times required such an outlet, still remain in the inexhaustible fertility of this wonderful country. This may be said to comprise, not only the neighbouring rich valleys of the Orontes and Bekaa, to which the cities of the Tetrapolis and many others owed their origin and rapid prosperity; but it was the channel through which flowed the riches of Mesopotamia, which gave birth to a Nineveh and a Babylon; and even the wealth of Persia and the furthest East have had, and still may find, an emporium in Seleucia. The great fertility of Mesopotamia was carried to its utmost limit, by means of the numerous canals for irrigation with which the country was everywhere intersected; some of the largest of these were navigable. They excited the wonder and interest of Alexander the Great, who examined them personally, and 'steered the boat himself.' He employed a great number of men to cleanse and repair them. 'Of all the countries I know,' says Herodotus, 'it is without question the best and the most fertile. It produces neither figs, nor vines, nor olives; but in recompense the earth is suitable for all sorts of grain; of which it yields always 200 per cent., and in years of extraordinary fertility as much as 300 per cent.'

"These advantages inspired ancient rulers, merchants, capitalists and engineers to construct works to which neither the destructive power of man, nor the convulsions of nature during more than 2000 years, have been able to do irreparable injury. It is truly an enduring monument of the well directed energies of its founders, and has vainly invited their apathetic successors to profit by so valuable a legacy.

"The commerce of the rich countries I have alluded to has, indeed, never ceased; for though almost annihilated by the discovery of the Cape of Good Hope, which enabled the

energies of a maritime nation to divert the greater part of that route, some portion still flows languidly by a perverted course and an inferior outlet; owing to the neglect of this, its natural channel and emporium. Thus the present trade of the East, centring in Aleppo, is carried on by means of camels and mules over the mountain pass of Beilan, the Syrian gates, and embarked at the unhealthy and inconvenient Port of Skanderùn, at the head of the gulf of the same name.

"The produce of the great basin of the Euphrates and the Tigris, including Persia and the nations on the southern slopes of the Taurus and Caucasus, demands an outlet. The natural one is of course the Persian Gulf; but the stream of commerce does not set that way, the demand being in the West. Providence has given the means, which were fully profited by in former times. The greater development of the present day does not find the ocean route sufficient, and the time may come when its increasing exigencies may stretch its iron tentacles even across Mesopotamia. These are visions of the future; which, however, daily experience proves is nearer to the present than any one dares to imagine. Leaving these to be unfolded by time, the present facilities are amply sufficient for the present resources.

"The country possesses in itself locomotive power to an enormous amount, which is produced and wasted, waiting century after century for employment. I mean in the thousands and thousands of camels,—ships of the desert,—that only live to crop the luxuriant herbage of the wide countries of which they might convey the more valuable productions; by a sluggish current it is true, but sufficient in amount, to fill more and greater marts and ports than Seleucia, and to call forth the swiftest energies of steam to carry off its slow but steady influx. In addition to all this, by the employment of their camels, the wandering Arab tribes would be reclaimed to civilisation and religion.

"We may see what can be expected of the revival of commerce in these rich countries by what has been done at Berût; where, with a port that affords less facilities for shipping goods than even Skanderùn, the town has become three times as large as it was only twenty years ago. But Seleucia, with a port where ships could load and unload at the quays without the tedious intervention of boats, and being safe from the delays of bad weather, would draw to itself all the trade of Aleppo; to which city a good road could be made, and eventually a railroad, as it has been ascertained by General Chesney's valuable and careful survey, that there are no obstacles to the construction of one.

"These fertile tracts now lie waste and unprofitable, except for imperfect and desultory cultivation by the hordes inhabiting the mountains on their borders; who, through devastating wars and a long series of bad governments, are reduced to such a condition of abasement, both physical and moral, that they draw but the merest necessities of food and clothing, from the varied and inexhaustible bounties of nature, by which they are surrounded. With security and encouragement, however, they would not only become active cultivators of the raw material, and increasing consumers of it, when returned to them in a manufactured state; but they would be zealous disseminators in regions which are now, from various impediments, inaccessible to British enterprise.

"If the better outlet were established which the restoration of the fine harbour of Seleucia would afford, it is probable that many of the merchants of Aleppo, especially the Franks, would be induced to settle here by the greater convenience they would find for their transactions, and by the greater chances of security for life and property here than at Aleppo, where they are in constant danger from the turbulent and fanatical population of that city, of which there was a melancholy instance in the autumn of 1850.

"The fine scenery and beautiful climate of the valley of the Orontes might also attract emigrants or speculators from England; while the native population of the north, or right bank of the Orontes, — who are all Christians, and though industrious and well disposed, are poor and stationary on the soil,—would have energy and elasticity imparted to them by the example of the settlers and the rewards of increasing prosperity. So that, from these germs, improved grades of society would soon arise to emulate the glories of ancient Seleucia. Such a result could not but be beneficial to the Turkish government; as it would bring great increase of revenue to its coffers from regions now yielding little or none. It would add to the strength of the empire, and be the means of imparting vigour to distant provinces, now exhausted and languishing, in the efforts made for the benefit of the capital.

"In order, however, to attain these advantages, it would be indispensable that guarantees and immunities be secured to the port and city, so as to leave enterprise unshackled. The Tanzimat proposes to do this; but unless vigorously enforced, this very liberal firman of the present benevolent Sultan will remain a dead letter, though intended by his Highness to bring all his subjects equally under the protection of the laws. Strenuous efforts are now being made by the Turkish government to carry out *bonâ fide* its provisions. No time could be more favourable than the present, when the efforts we are making to uphold the tottering empire must convince the Turks of the sincerity of our good will, which should lead them to unite cordially in any project that holds out a prospect of great mutual advantage. With such guarantees as might reasonably be expected from the present circumstances and disposition of the Porte, it would seem to promise to be a safe speculation,—a small risk for a great ultimate advantage."

It is to be remarked upon this very valuable testimony

to the advantages of the proposed route, that what Captain Allen says of Mesopotamia appertains, strictly speaking, only to Babylonia. The Pallacopas navigated by Alexander was a canal 80 stadia distant from Babylon; the ancient system of canal irrigation did not extend beyond the alluvial plains of Babylonia and Chaldea, and the country alluded to by Herodotus (Clio, 192) is Babylonia solely. Mesopotamia produces figs, vines, and olives, as well as Syria. To these may be added the cereals, rice, cotton, tobacco, castor and sesamum oil, pistachio, mulberry, pomegranate, oranges, lemons and citrons, and a great variety of fruits, esculent vegetables and roots. The hilly country produces timber for construction, ship-building and cabinet-work, gall-nuts, and an infinite variety of dyes, drugs and medicinal plants.

The extent of fertile tracts that now lies waste and unprofitable in these regions is immense. In the valleys of the Euphrates and Tigris there are many tracts of irreclaimable wilderness, but in most portions of the curves of both rivers there are more or less extensive tracts of river alluvium, in which the whole of the soil is cultivable. A few of these—Hawi as they are called by the Arabs—are actually cultivated, or are the seat of towns and villages; upon others, the nomadic Arabs occasionally pitch their tents and feed their flocks, but the generality are left to the wild boar and the francolin. The ruins of ancient cities, as Nimrud, Kalah Shirgat, and Opis on the Tigris; of Europus, Balis, Thapsacus, Rakkah, and Zenobia on the Euphrates, are met with on spots of this description, showing that what is now a grassy solitude was once cultivation and populousness. In the lower part of the Euphrates, south of Annah, large tracts of grassy land are shown to have been once cultivated, by the remains of great water wheels with which these lands were irrigated. At some few points, as at Mosul, Tekrit, and Bagdad on the Tigris, and at Bireh-jik, Kalah Jabar,

Deir, Rahabah, Anniah and Hillah on the Euphrates, the land is partially cultivated; but there remain in the valleys of both rivers hundreds of miles of cultivable land in a most fertile and productive climate, untenanted, and only awaiting for colonisation by industrious people, or that security and encouragement which would be given by intercommunication and the opening of markets for the produce. There is no possible reason why, under such circumstances, the valleys of the Euphrates and the Tigris should not rival those of the Ohio and the Mississippi, or why they should not be, what they were of yore, the seat of rich and prosperous communities.

"Long before Babylon had overcome her rival Nineveh she was famous for the extent and importance of her commerce. No position could have then been more favourable than hers for carrying on a trade with all the regions of the known world. She stood upon a navigable stream that brought to her quays the produce of the temperate highlands of Armenia, approached in one part of its course within almost one hundred miles of the Mediterranean Sea, and emptied its waters into a gulf of the Indian Ocean. Parallel with this great river was one scarcely inferior in size and importance. The Tigris, too, came from the Armenian hills, flowed through the fertile districts of Assyria, and carried their varied produce to the Babylonian cities. Moderate skill and enterprise could scarcely fail to make Babylon, not only the emporium of the Eastern world, but the main link of commercial intercourse between the East and the West.

"The inhabitants did not neglect the advantages bestowed upon them by nature. A system of navigable canals that may excite the admiration of even the modern engineer, connected together the Euphrates and Tigris, those great arteries of her commerce. With a skill, showing no common

knowledge of the art of surveying, and of the principles of hydraulics, the Babylonians took advantage of the different levels in the plains, and of the periodical rises in the two rivers, to complete the water communication between all parts of the provinces, and to fertilise by artificial irrigation an otherwise barren and unproductive soil. Alexander, after he had transferred the seat of his empire to the East, so fully understood the importance of these great works, that he ordered them to be cleansed and repaired, and superintended the work in person, steering his boat with his own hand through the channels."*

The Periplus of the Erythrean Sea, and the Rescript of the Roman Emperors found in the Digest of the Roman Law, both contain lists of articles imported in ancient times from the East, and which have been ably commented on by Dean Vincent in his well-known work, "The Commerce and the Navigation of the Ancients in the Indian Ocean." If we compare these meagre catalogues of articles of commerce with what is known of the animal, vegetable, and mineral produce of Arabia, Persia, Syria, and the adjacent countries in the present day, the condition in which those countries are placed, compared with what they were in ancient times, still so favoured by nature and yet so neglected by man, becomes a matter of absolute surprise. It is impossible, indeed, to appreciate or understand such a state of things without some personal experience of what a long series of bad governments can do in reducing man to such a condition of abasement, both physical and moral, that he becomes utterly indifferent to everything but the merest necessities of food and clothing; and these he draws with scarcely an effort (for the children drive the flocks and

* Nineveh and Babylon, by A. H. Layard, M.P. and D.C.L. John Murray, Albemarle Street. 1853.

collect the fuel, and women weave the camel-hair cloak and tent cloth) from the varied and inexhaustible bounties of nature by which he is surrounded.

" That these wild tribes, however, are not insensible to justice and to a feeling of gratitude, that even they, ignorant and barbarous as they are, may be easily governed and moved by kindness and equitable treatment, has been proved by their conduct towards the few English merchants and travellers who have had dealings with them, and have visited the rivers on which they principally dwell. When, on more than one occasion during my residence in the East, the navigation of the Tigris had been completely interrupted, and all vessels belonging to the Turkish government and its subjects had been stopped or plundered, so that the communication between Busrah and Bagdad had entirely ceased, a British merchant was able to bring up his own boats laden with valuable cargoes through the midst of crowds of armed men, who lined the banks. For these Arabs knew that, in their dealings with Englishmen, they had been treated with justice and kindness, and that the black mail they levied, however contrary to our treaties with the Porte, when once agreed to, had always been honestly paid."

" When after a long ride of about eleven hours we reached some brackish springs, called Belaliss, the complete solitude lulled us into a feeling of security, and we all slept without keeping the accustomed watch. I was awoke in the middle of the night by an unusual noise close to my tent. I immediately gave the alarm, but it was too late. Two of our horses had been stolen, and in the darkness we could not pursue the thieves. Sahiman broke out in reproaches of himself as the cause of our mishap, and wandered about until dawn in search of some clue to the authors of the theft. At length he tracked them, declaring unhesitatingly that they were of the Shammar, pointed out, from marks almost imper-

ceptible to any eye but to that of a Bedouin, that they were four in number, had left their delouls at some distance from our tents, and had already journeyed far before they had been drawn by our fires to the encampment. These indications were enough. He swore an oath that he would follow and bring back our stolen horses, wherever they might be, for it was a shame upon him and his tribe that, whilst under his protection in the desert, we had lost anything belonging to us. And he religiously kept his oath. When we parted at the end of our journey, he began at once to trace the animals. After six weeks' search, during which he went as far as Ana on the Euphrates, where one had been sold to an Arab of the town, he brought them to Mosul. I was away at the time, but he left them with Mr. Rassam, and returned to the desert without asking a reward for performing an act of duty imperative on a Bedouin. Such instances of honesty and good faith are not uncommon amongst the wandering Arabs, as I can bear witness from personal experience."

"Mr. Rassam frequently sent Suttum across the desert with as much as five or six hundred pounds in money, and always with the most complete confidence. His only reward was an occasional silk dress, or one or two camel loads of corn for his family, the whole of the value of a few shillings. Of late years, the wool of the Bedouin sheep has been in considerable demand in the European markets, and a large trade in this article has already been opened with the Shammar. Money is generally advanced some months before the sheep are sheared, to enable the Arabs to buy their winter stock of provisions. Mr. Rassam has thus paid before hand several thousand pounds without any written or other guarantee whatever. The tribes leave the neighbourhood of the town, and are not again heard of until their long strings of camels are seen bringing the promised wool. I remember a Bedouin coming all the way alone from the neighbourhood

of Bagdad to pay Mr. Rassam a trifling sum, I think between three and four shillings, the balance of a wool account between them."

"A youth of the great tribe of the Aneyza having quarrelled with his parents, ran away and came to Mosul, when he entered as a student in a college. He became a Mullah, and had almost forgotten his early friends, when the tribe, driven by a famine from the Syrian desert, crossed the Euphrates, and encamped near the town to buy corn. Ibn Gayshish, their Sheikh, hearing by chance that the fugitive was still alive, and now a member of the priesthood, sent a messenger to him to say, that since he had quitted his tents his father had died, and had left a certain number of camels, which had been divided according to the law amongst his family. Those allotted to him had been in the safe keeping of the tribe, and had increased yearly. The chief was now ready to do with them as their rightful owner might direct."*

Mr. Layard on several occasions remarks in his valuable writings how cheerfully the Arab works as an ordinary labourer, when his feelings and prejudices are in some degree considered by those who are at once firm and just.

It is manifest that all the arguments brought forward in favour of an Egyptian ship canal apply with equal, if not with greater, force to the opening of the more direct overland route by the valley of the Euphrates. As far as feelings of antagonism are concerned between nations, the motives for hostile rivalry are tending successively to give place to that generous emulation which gives birth to great things, and such a change would be more quickly brought about by projects such as we now contemplate, than by any other events that can be made to present themselves to the imagi-

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* Nineveh and Babylon, by A. H. Layard, M.P. and D.C.L. John Murray, Albemarle Street. 1854.

nation. Financial and commercial interests should never be allowed to cause division between two great nations. Take, for example, England and France: the immense development of international commerce brought about by British capital thrown into all the undertakings of France, has established ties between the two countries which become closer every day. Nor should political interests or questions of principle be permitted to interfere with the progress of civilisation and the peace of nations. All civilised peoples can have but one common aim, one same ambition: the triumph of right over might — of civilisation over barbarism. Even the sordid jealousy of territorial expansion is a feeling that should be repudiated by all generous governments. People feel and acknowledge in the present time that the globe is vast enough to offer to the spirit of adventure that animates their respective populations, countries to make available, human beings to withdraw from a state of barbarism, and so long as the civilised nations of the world, instead of thwarting one another, as has too often been the case in projects of this description, work together, as they ought to do, the conquests of the one profit by the activity of the other.

M. Lesseps has, in a letter addressed to Lord Stratford de Redcliffe, grappled with the subject of the political inconveniences of the route to India through Egypt.

"There is, in fact, a point of the globe with the free passage of which the political and commercial power of Great Britain is bound up, a point, the possession of which France had, on her part, aspired to in former times. This point is Egypt, the direct route from Europe to India, Egypt bathed once and again with French blood.

"It is superfluous to define the motives which would not allow England to see Egypt in the possession of a rival nation without opposing it by the most energetic resistance; but what should also be taken into serious consideration

is, that with less positive interests, France, under the dominion of her glorious traditions, under the impression of other feelings more instinctive than rational, and therefore more powerful over the impressionable spirit of her inhabitants, would not, in her turn, leave to England the peaceable sovereignty of Egypt. It is clear that so long as the route to India is open and certain, that the state of the country ensures the facility and promptitude of the communications, England will not set about creating the most grave difficulties by appropriating a territory which, in her eyes, has no other value than as a means of transit. It is likewise evident that France—whose policy, for the last fifty years, has been to contribute to the prosperity of Egypt, both by her counsels and by the concourse of a great number of Frenchmen distinguished in the sciences, in administrative capacity, in all the arts of peace or war — will not seek to realise, in this direction, the projects of another epoch, so long as England does not interfere.

"But let one of those crises occur which have so often shaken the East, let a circumstance arise wherein England should find herself under the rigorous necessity of taking a position in Egypt to prevent another power from forestalling her, and tell us then if it is possible that the alliance could survive the complications which such an event would occasion. And why should England consider herself obliged to become mistress of Egypt, even at the risk of breaking her alliance with France? For this single reason, that Egypt is the shortest and most direct route from England to her Eastern possessions; that this route must be constantly open to her; and that, in whatever concerns this mighty interest, she could never temporise. Thus, from the position given to her by nature, Egypt might still become the subject of a conflict between France and Great Britain; so that this chance of rupture would disappear, if, by a providential event, the

geographical conditions of the ancient world were changed, and that the commercial route to India, instead of passing through the heart of Egypt, were removed to its confines, and, being opened to all the world, could never be exposed to the chance of its becoming the exclusive privilege of any one."

The object here proposed would be at once attained by adopting the line of the valley of the Euphrates in preference to that by Egypt. The commercial route to India, instead of passing through the heart of Egypt, would then be removed far away beyond its confines—(it is a grievous mistake—one which a mere glance at the first map at hand would serve to correct—that Egypt is the shortest and most direct route from England to her Eastern possessions)—and apparently the only possible bone of contention between England and France would be for ever removed, the union of the two peoples rendered for the future unalterable, and the world preserved from the calamities which a rupture between them would produce.

In relation to another very serious consideration—that of the future prospects of the empire of our august ally, the Sultan—it is obvious that the opening of the valleys of the Euphrates and Tigris would certainly, more than any other projected undertaking, contribute to the preservation of the Ottoman Empire, and to demonstrate to those who have been wont to proclaim its decay and ruin, that it still has a productive existence, and that it is capable of adding a brilliant page to the history of the world's civilisation. This view of the subject was entertained and upheld at an untoward period in the history of Turkey—when Syria was occupied by a hostile Egyptian force. But at that time Russia was in the ascendant in the East, jealousy of influence, and still more so of possible territorial extension, was then permitted to have full sway, England and France had not united to establish

the force of right against that of might, and to vindicate the cause of progress and civilisation in the East over that of barbarism. Russia held sway not only over the Porte, but over the timid councils that then influenced Great Britain, and a noble and praiseworthy project was abandoned at the dictation of the Muscovite.

Why, it has been truly asked, have the governments and the peoples of the West combined to uphold the Sultan in the possession of Constantinople? and why has he who has thought fit to menace that position met with the armed opposition of Europe? Because the passage from the Mediterranean into the Black Sea is of so much importance, that whatever European power might become master of it, would domineer over all the rest, and destroy that balance which the whole world is interested in preserving.

Establish, then, at another and far more extensive point of the Ottoman Empire, a similar and a yet more important position—make the valley of the Euphrates the highway of the commercial world, and you would restore millions of productive acres to the revenue, bring thousands of merely vassal tribes within that pale of order and fair tribute which they have long learned to disregard; and while you thus improve to an almost incalculable extent the resources of the empire, you create in the East another immovable seat of power, for the great powers of Europe, from fear of seeing such one day seized upon by one of them, would regard the necessity of guaranteeing its neutrality as a question of vital importance.

Germany could not but hail the opening of the valley of the Euphrates with satisfaction. It would indeed be to her the complement to the free navigation of the Danube. The Czar ought to consider that the mission of civilisation which devolves upon him over the numerous tribes of whom he is arbiter may yet suffice the noblest ambition. The new

outlets which will be pacifically thrown open to their activity and to their necessity of expansion, would be more profitable to them than a traditionary policy of conquest and exclusive dominion, which is now no longer possible.

"After all that has been done by printing, the mariner's compass, steam, the nineteenth century, by the realisation of this great undertaking (the Euphrates Valley Railway), would again change the face of the globe. The honest Turk, the polished Persian, the rude but laborious Kurd, the roving Arab, and the oppressed Christian and Jew, attached by resistless ties to the new circle of traffic which the continent of Europe unceasingly creates and feeds, would be all alike gradually brought within the pale of a general civilisation.

"Mr. Anderson (one of the managing directors of the Peninsular and Oriental Steam Navigation Company) has pointed out, that suppose the 150,000,000 of Indians and 350,000,000 of Chinese should, in consequence of increased facilities of communication, augment their outlay in the purchase of English produce by one shilling each, this modification alone, insignificant as it appears, would augment the amount of exports by 25,000,000*l.* How much would this be further increased if we brought 12,000,000 of dwellers in Ottoman Asia, and 10,000,000 of dwellers in Persia into the same category, and which would be effected by superadding the opening of the valley of the Euphrates to that of the Isthmus of Suez, or by supplanting the one by the other?

"It has been justly remarked by another writer, that the argument adduced by some, of problematical dangers arising from increased facilities of communication, has its origin in the old distrusts of that worn-out theory, that miserable tissue of mistakes that took upon itself to teach that a people is only rich and flourishing in proportion as its neighbours

are indigent and unfortunate. Doubtless the countries of Europe nearest to the East would derive a considerable profit from the opening of the valley of the Euphrates as they would also from that of the Isthmus of Suez; but our egotism ought to find therein a motive for satisfaction, for we cannot be ignorant of the fact that the development of commerce, whatever be the means employed, always ends by bringing the better part of the profits to the most intelligent and most numerous firms.

"England and France, and even other nations by their example, appear, as a result of a war carried on especially for the sake of civilisation, now called to great works which throw into shade the most striking deeds of history. Among these works of the future, it appears that the opening of the valley of the Euphrates, and the restoration of Syria and Mesopotamia, of Assyria and Babylonia, stands first in rank. Such a proceeding, by multiplying and strengthening the ties by which people of all climates, of all races, of all beliefs, are united to Great Britain and France, would connect for ever the general prosperity of nations with the happiness of those countries, their security with their power, and their independence with their liberty."*

The present far-seeing Emperor of the French, writing upon the projected opening of the Nicaraguan ship canal, said: "Think of the almost miraculous effects which will be produced by the annual passage across this fine country of 2000 to 3000 vessels, which would exchange their productions for those of the East, and cause life and riches to circulate everywhere. We may picture to ourselves those shores, now so solitary, peopled with towns and villages; those lakes, now gloomy and silent, furrowed by ships; those rugged lands fertilized, and the interior canal carrying the

* Colburn's New Monthly Magazine.

benefits of civilisation into the heart of the country." In how much more comprehensive and practical a manner would the same anticipations apply to the opening of the valleys of the Euphrates and the Tigris, once the home of Assyrians, Babylonians and Chaldeans; where the daughters of Zion sat down and wept; the centre of the conquests of the Macedonians; where once stood the proud capitals of the Sassanides and of the Khalifs; now deserted and tenantless.

As mankind multiply and make progress in arts and civilisation, new wants arise, and the ingenuity of man is taxed to discover new sources of wealth, maintenance, and occupation; and we find, under the dispensations of an all-wise Providence, that at suitable seasons resources are unveiled which have been long provided but concealed until the fit occasion presents itself. Amongst the numerous administrations of the same wise and merciful design, it is not unreasonable to believe that the opening of the valleys of the Euphrates and Tigris, and the resuscitation of the great nations of antiquity, are amongst the events designed to minister to the growing wants and improvements of the human race.

Looked upon in another point of view, in the light of reflected benefits—25,000,000 and upwards of human beings inhabiting Western Asia, and 500,000,000 and more inhabiting Central and Eastern Asia, remain to this day enslaved by debasing superstitions, and sunk in mental darkness and delusion—what a field is here opening to the Christian philanthropist! To aid in the removal of ignorance and superstition by the diffusion of useful knowledge and an enlightened religion, to plant industry and the arts where indolence and barbarism have hitherto prevailed, are noble efforts, calculated to elevate and bless alike those who give and those who receive. The opening of the central regions of Western Asia, and of a new and easy line of communication between

the East and the West, would obviously subserve the promotion of such objects, and therefore has a claim upon the sympathy and support of every one taking an interest in the advance of nations in prosperity, civilisation and happiness.

It is not too much to say that there is no existing or projected railroad that can for a moment compare, in point of interest and importance, with that of the Euphrates Valley. It brings two quarters of the globe into juxta-position, and three continents—Europe, Asia and Australia—into co-relation. It binds the vast population of Hindustan by an iron link with the people of Europe, it inevitably entails the colonisation and civilisation of the great valleys of the Euphrates and Tigris, the resuscitation in a modern shape of Babylon and Nineveh, and the re-awakening of Ctesiphon and Bagdad of old.

What is there in any other railway that can compare with results of such magnitude, fraught with so many interests to various nations, as can be here obtained; and who can foresee what ultimate results such communication may give rise to in the relations of these nations—the comparative condition of Hindus and Chinese, and of Europeans? In all such cases it is distance and difficulties of intercourse that uphold distinctions. Annihilate space, and the great barriers that separate people, and the differences of manners and customs, of modes of thought and feeling, of doctrines and dogmas, of precept and prejudices, that keep up these barriers, gradually disappear, and an approach to unity is more and more realised.

"Several schemes have been projected of railways across Asia Minor—a country of very remarkable physical configuration—being in fact a great central upland, interrupted by mountain chains, and chequered by more or less isolated culminating points, cut on its confines by deep river-bearing glens and ravines, or sloping off more or less precipitously

to the lower maritime or littoral band. The most wild and visionary of these schemes was one propounded some time back in the *Calcutta Review*—in a sketch which has been since reproduced in the form of a pamphlet. The absurdity of the project, and the utter ignorance and indifference to geographical details exhibited in its discussion, have been so fully exposed by an anonymous traveller in a pamphlet entitled 'The Euphrates Valley Route to India,'* that their further discussion need not detain us here."

"On the other hand, as far as practical suggestions are concerned, the fact is, as long ago pointed out by General Chesney, and since by Mr. Andrew, that the valley of the Halys, now called Kizil-Irmak, presents a great natural opening across the central upland of Asia Minor, and affords an easy approach from Taurus to the Black Sea, or to the great Constantinopolitan road from Scutari to Armenia and Persia. The positive and practical details of the first part of this route from Scutari, by the pass of Hajji Hansah, to the valley of the Halys, have been described in a communication laid before the British Association, at its meeting in Belfast in 1852. The central portions of the valley of the Halys present no engineering difficulties whatsoever. The valley is one of exceeding beauty, pastoral in its lower part, the towns and the villages lying at the foot of the hills at some distance from the river bed; higher up it still continues expansive, but becomes wooded and dotted with picturesque towns and villages, which only want roads and more available means of intercommunication to impart to them the life and animation of Europe. The valley narrows in its upper part near Yarapason, and at a point a little beyond this the line would leave the Halys by the valley of a small

* The Euphrates Valley Route to India. By a Traveller. Stanford, Charing Cross. 1856.

tributary called Injeh-su. Passing thence along a natural opening that presents itself between the foot of the giant Arjish Tagh and the town of Injeh-su, on to the plain of Nigdeh, it would gain the Cilician Gates, now called Kulak Boghaz, or "narrow pass," by which it would descend into the fertile and populous plains of Cilicia, from whence Seleucia could be reached by a littoral line, or Antioch by the pass of Bailan."*

Long before such a junction would be effected, it is to be hoped that the Euphrates railway would extend the whole length of the river valley. In such a case the time occupied in the transit would be reduced to a journey of a few days only, and when the navigation of the Persian Gulf could be superseded by a Persian littoral line of rail, as suggested by that distinguished geographer, Sir Justin Sheil, the whole journey from Ostend or Calais to Kurrachee will be performed in an incredibly small space of time. It is more than probable, however, even should uninterrupted railway communication be carried out with India, that the Persian Gulf and the Mediterranean would still remain the line of traffic for heavy goods, and that Kornah and Seleucia, the termini of the Euphrates railway, would still be the commercial harbours of the East and the West. This would be particularly the case with regard to Australian traffic. It is a common mistake that the road *viâ* the Isthmus of Panama is the shortest from London to Sydney. The two routes stand in the relation of 8400 geographical miles *viâ* the Euphrates, and of 9900 geographical miles *viâ* the Isthmus of Panama, or 1500 geographical miles in favour of the Euphrates route. It would probably remain for a long time cheaper to ship goods that had been conveyed to Seleucia from India, China, or Australia, *viâ* the valley of

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* Bentley's Miscellany.

the Euphrates, at all events such as are destined from Great Britain, France, and Western or North-Western Europe generally, than to convey them along extended lines of railway belonging to different countries, and subject to various tariffs. With passengers it would be different. A certain increase in expense might be deemed to be counterbalanced by greater rapidity of transit.

Awaiting, however, the completion of the Indo-European line of railway, the more immediately feasible part of the plan, as now before us, would free the voyage of all its difficulties and inconveniences, and exempt the passenger from most of his previous pains and penalties. The transit from London to Kurrachee would become indeed a mere pleasure excursion. From Trieste the traveller would speed his way along the Adriatic, the navigation of which is proverbially easy and safe. The bold and picturesque shores of the opposite coasts are visible throughout on both sides. Entering the Mediterranean, he would pass the Ionian Islands, Candia, Rhodes and Cyprus, rich in picturesque beauties and historical associations, never at the same time losing sight of the shores of the Morea and of Asia Minor, till the lofty peak of Mount Casius would announce his entrance into the Bay of Antioch and at the old port of the Macedonians—Seleucia Pieria.

Few regions on the face of the earth can compare with the Bay of Antioch in point of scenic beauty. No wonder that the city of Seleucus Nicator, the port of the kingdom of Antioch, and the place of embarkation of the most gifted of the Apostles, should have been once an opulent, flourishing, and exceedingly populous city. Let us hope that its old harbour will be speedily restored, and that modern steamships will re-awaken the echoes, which were once roused by the galleys of the Romans, in the neighbouring fastnesses of Mount Rhossus.

Issuing from the bosom of this lovely valley, teeming with

the fragrance of myrtle and box, and everywhere clad with a rich and luxuriant vegetation, over which, here and there, as at Seleucia, surnamed the "Stony," and over the Orontes, smiling on its way to woo and win the island-nymph Melibœa, rocks and crags topple in wild disorder, the traveller will pass Mount St. Simon, a relic of old monastic seclusion and penitence, and gain the open, wooded, and ever fair valley of Antioch, once the seat of the luxurious and seductive Daphne, and still the site of a town once renowned as the residence of the Syrian kings, as one of the largest cities of the world, and as the chief station of the Christian religion.

Beyond this, a green slope with the river on one side and hills on the other, will lead him to where the Orontes is crossed by the Jisr Hadeed, or Iron Bridge, the well-known *Pontisfer* of the Crusaders—the line of passage being marked by the marshes of the lake of Antioch on the one side, and available green sward on the other. It is the same marsh that determined the fate of the Palmyrean light horse when combated by the cohorts of Aurelian. The great plain of Antioch is still called Emk, a corruption of Emma, the Roman name of a site, now marked only by some ruins upon the Em-guli-su, or water of the lake of Em. At the outset of the journey, the ruins of churches, monasteries, and private dwellings, with great reservoirs hewn out of the solid rock—remains of an early and persecuted Christianity—abound.

As we advance, the fertile plain of Danah is seen, surrounded by the ruins of Christian villages; and beyond this is Aleppo, occupying with its extensive suburbs eight small hills of unequal height, the intermediate valleys, and a considerable extent of flat country, the whole comprehending a circuit of about seven miles, and that again surrounded by gardens and orchards of pistachio, fig, pomegranate, orange, lemon, olive, vine, mulberry, cotton, tobacco, castor, sesamum, and an infinite variety of fruits and vegetables. The

long time metropolis of Syria is shorn of its pristine magnificence, but it is still a great city, of very considerable commercial importance from its central position in relation to other Syrian towns, and of no mean resources within itself.

The traveller quitting Aleppo will probably first touch the river Euphrates at Balis, in the time of Cyrus the seat of a park and a palace of Belesis, the governor of Syria, and where some lofty ruins still represent the Barbalissus of the Romans. Having thus gained the open valley of the "Great River," the traveller would henceforth have little to complain of as to the wearisomeness of his journey. Almost every bend of the stream would present him with a new scene—the same great river under a new aspect—its waters narrowed at one time, at another stretching out into lakelike expanses, and then again rolling lazily along in many silver streams separated by as many burnished golden islands. The banks would present him with alternately vast expanses of level green sward interrupted by low rocky ridges that advance towards the river bed at the salient points, or long belts of tamarisk and other shrubs or trees, or pastoral lands dotted with the tents of nomade Arab tribes, or cultivated plains with the villages of a sedentary and agricultural people, or wildernesses of wormwood, as they were in the days of Xenophon and still are in part, or rocky hills as at Zelebeh, or level sandy plains as in Babylonia, or ultimately marshes and endless groves of dates, as they become in their lower or Chaldean portions. Ruins of olden cities, castellated buildings, and modern towns and villages, with occasional wooded and inhabited islands, diversify this long valley. Ja'ber Castle, the proposed terminus of the first section of the railway, is the first to attract attention. Little is known of its history. It is called Kalahi Jaber by Abulfeda, but we learn from Golius that it was called Dauser, after its founder, one of the princes of the Mundar dynasty.

Stephanus of Byzantium also notices the castle by the name of Dausara; and it is related of the Emperor Julian, by his historian, Ammianus Marcellinus, that he visited Duana, "a presidential castle." The *Equites Mauri Illyricani Dabunæ* are also mentioned in the "Notitiæ Imperii," as under the Duke of Osroene; and Procopius enumerates the castle of Dabanas among others on the Euphrates. Sulinam, chief of the Ughuz Turks, who was drowned in the Euphrates, was buried here, and henee D'Herbelot says it was called Mizari Turk. Knoller, in his history of the Turks, calls it Ziebar Cala. Sultan Selim erected a mausoleum at the spot where the remains of his great ancestor reposed, and a monastery of dervishes was also founded at the same place by the Sheikh Abu-Bekir.

Opposite to Kalah Jaber are the Abu Bara hills, with two or three Sheikhs' tombs and towers on their crest, and the plain beyond is cultivated by the Wulda Arabs. Beyond Jaber an extensive forest district, known to the Arabs as the Zor, stretches as far as to where the river, bending to the eastward, spreads out into a magnificent lake-like expanse, having the mounds of Sura—"*Flavia firma Sura*"—and the ruins of Thapsacus — Tiphsah of Solomon — the most renowned of all the passes of the Euphrates at one end, and the Nikephorum of the Macedonians, the Callinicus of the Romans, and Rakka of the Khalifs, at the other. A more impressive and striking scene can scarcely be imagined; and it would take a volume to place on record all the points of historical interest that are associated with it.

The plain of Siffin, the scene of a long and disastrous conflict between the first successors of Muhammad, and a long line of jungle and forest called the Aran, are followed by a ridge of basaltic hills, which stretch all the way from Palmyra to a point on the river, where is also the site of another Palmyrean town or port on the Euphrates—a most interesting

and remarkable mass of ruins—a castle of the Persians occupying the summit of a hill nearly opposite to it. A more open and cultivated country, studded with quadrangular mud forts and the villages of *Mudan*—agricultural Arabs—extend from Zelebeh, the Palmyrean ruin, to Dair, "the monastery"—a little town of some importance among the Arabs. Not far — some thirty miles — beyond, the river Khabur — the Habor of the Captivity — flows into the Euphrates at the site of Carchemish of the Scriptures, afterwards Cercusium, the limitrophal town of the Romans.

Beyond this, again, we have Zaita, "the olive grove," and Mayarthin, an Arab town, with the old castle of Rahabah in the background; and a little further on, where some cliffs advance perpendicularly upon the right bank of the river, the ruins of the town and citadel of Salahu-d-din, "the defender of the faith," as Yusuf, the son of Ayub the Kurd and the Saladin of the Crusaders, designated himself. The ruins of Werdi, once a great and opulent city on the Euphrates, and Al Kayim, the station at which the Damascus and Bagdad caravans touch the river, lead the way to Annah, incomparably the most picturesque town on the river. Lastly, a low hilly country, once generally cultivated, and still partially so, and diversified by villages of sedentary Arabs; and a river intersected by islands, once the seat of colonies of captive Jews, and now the home of well-disposed agricultural tribes, lead the way, past Hit or Izannesopolis, celebrated for its bitumen fountains, to the great plains of Babylon and Bagdad.

The traveller may be disappointed in the present aspect of a city endeared to him by romance and history; the mausoleum of Zobaide may not, although a very remarkable remnant of Arabian architectural skill, equal what he may have anticipated of the wealth and power of the Khalifs; the schools and colleges, the coffee-houses and bazaars of

modern Bagdad, and still more so of Bussorah, once its rival in learning, in literature, and in commercial prosperity, may not come up to his preconceived ideas of the wealth and wondrous art of these cities so famed in story. Babylonia and Chaldea, once the seat of powerful empires, covered with great towns and cities—the centres of riches and consequent corruption—with plains once clothed with vegetation, well peopled, or dotted with lowing herds, are now mere clay or sand, green sward or marsh, with here and there an Arab village, or a mound, from whence the curious archæologist extracts the sculptured remnants of olden times, or slabs engraven with the names of Babylon's ancient monarchs. Times have sadly changed from the days of terraced palaces in Babylon, of renowned schools of arts and sciences at Bagdad, or of sumptuous caravanserais at Bussorah. The modern Sinbads of commerce are a degenerate race. But minarets and domes still glitter from among forests of date-trees, and a motley population from all quarters of the globe, busily engaged in commercial operations, soon satisfy the traveller that the ancient glory of Bagdad and of Bussorah is not entirely departed. Above all, there remain those two great and noble rivers—the Tigris and the Euphrates—uniting at Kurnah into one grand, calm and expansive Shat, or Firth, which must always offer the ready means of resuscitating all the populousness, the prosperity, and the glory of bygone days.

The Persian Gulf lies beyond this, land-locked and diversified by islands like another Adriatic—but an Oriental Adriatic—its sparkling, translucent waters displaying shells and corals of such bright and vivid colours as to rival those of the brilliant fish that dart past along its clear depths. There can be no pains or penalties in such a journey as this; the sun may be hot, but there is a sea breeze to cool the wayfarer, yet not strong enough to lift the wave; and the very

sight of those bright green waters, their brilliancy enhanced by torrid sandy plains, or relieved by fringes of dark date groves, is always refreshing.

We have been so far carried away in depicting the pleasures of a trip from London to Kurrachee, that we had almost forgotten the consideration of the European and Indian Junction Telegraph, a project not only of the deepest import in itself, but one which derives a more immediate interest from its not having to wait the time necessary for laying down a line of rail, and establishing steam-boats on the river Euphrates, to be carried into execution. The formation of a company to carry out such an important object has been encouraged, if not positively necessitated, by the East India Company having on the one hand come to a resolution to lay down a telegraphic submarine cable from Kurrachee to the head of the Persian Gulf, and by the Austrian government having established a company, with the requisite capital, guaranteed by the state, for laying down a submarine telegraph in connexion with its land lines, from Cattaro or Ragusa, on the coast of the Adriatic, *viâ* Corfu, Zante and Candia, to Cyprus and Seleucia direct, or to Alexandria, and thence by Jaffa and Beyrut to Seleucia.* When the submarine and Indian systems meet at Seleucia, the connexion between the East and the West will be complete, and England, the Continent and India will be placed in hourly communication. Three modes have presented themselves of establishing the proposed connecting link: one has been by the ordinary system of wires suspended in the air upon posts or standards of wood, iron or stone, and insulated by earthenware rings: a second has been by means of a subterranean cable, insulated by a gutta percha tubing, or by earthenware pipes, such as are

* A line of submarine telegraph will, it is expected, be also established shortly between Constantinople and Seleucia.

used for drains and manufactured by the natives of the country; and the third, by a subfluviatile cable, or a cable carried along the bottom of the river Euphrates. It is obvious that the two last-mentioned systems present the greatest security, but the latter would be exposed to danger in a river navigated by steam-boats, and the subterranean telegraph is always exposed to the drawback of the difficulty attendant upon discovering the seat of an accident and in remedying it. There seems to be no valid reason why the connecting link should not be established by the ordinary telegraphic system. As to physical difficulties, there are none whatsoever. Whatever difficulties do exist, are connected with the more or less lawless and semi-barbarous state of the country through which the wires would have to be conveyed. But the Arab, although in some instances by education and by profession a robber, does not appear to be wantonly destructive. No instances of the kind will be found in the books of travellers. The untouched ruins and monuments of different kinds, met with along the banks of the rivers Euphrates and Tigris, attest rather to a conservative feeling. There are castles on the Euphrates which date as far back as the time of the Khalifs, the rooms of which are perfectly inhabitable. There are fresco paintings in the halls of Birijik Castle of the times of the Crusaders, and inscriptions at Rakka of the time of the first Sultans, that have never been injured, save by time. The Arabs do not even appear to destroy animal life wantonly. They detest pork, yet they do not trouble themselves to destroy the innumerable boars that fatten in their *hawis*—the rich alluvial plains of the rivers. In fact, from all that can be gathered, they appear to rob but not to destroy. Were they wantonly destructive, so as to fire encampments, cut date-trees, break down dykes, or ravage corn-lands, olive-groves, and gardens, the consequence in such countries would be very disastrous.

Providence seems not to have given to them such an evil propensity in addition to others. But, supposing even that the contrary were the case, and that the Arabs were wantonly destructive, those dwelling along the banks of the Euphrates are for the most part of sedentary habits, pastoral or agricultural, and they would be among the least disposed to injure property, the destruction of which would be of no advantage to them. They might entertain some superstitious ideas in connexion with a system of wires carried across their lands, but these would be easily dissipated by proper explanations made to them of the meaning and purport of the wires; and the most perfect security would be obtained by employing the Arabs themselves to protect them, and by its being in the power of the Company's agents to say that they were used not only by Europeans, but also to carry the messages of the Sublime Porte and of the Sultan himself—the actual Khalif and head of their religion.

The British government and the Honourable the East India Company duly appreciate the power of supervision and control put into their hands by the telegraph, binding, as it does, the isolated and distant dependencies of the empire to the mother country, and they are understood to be prepared to extend their countenance and support in a fair and liberal spirit.

The merchant and the shipowner are also well acquainted with the inestimable value to them of the power of imparting and receiving prompt information. But even this is not to be compared with the interest attached to such a means of rapid intercommunication of ideas by relatives and friends, more especially by members of families when at a distance from each other—parents and children, husbands and wives. The electric telegraph becomes in such instances a real boon to humanity.

"The Indo-European telegraph," says an anonymous

writer, "is undoubtedly one of the most valuable and important series of projects brought before the public by Mr. Andrew, and it is calculated, with the opening of the Euphrates and Indus to passengers and goods traffic, to most materially enhance the development of the resources of our vast Indian empire. Nor can it for a moment be doubted but that a line of electric telegraphs between Europe and India must be a successful commercial enterprise, putting altogether out of sight the important moral effects which such means of rapid communication must of necessity bring about. It may, on the contrary, be doubted whether any more efficient means could be adopted to develop the resources of India, and to consolidate British power and strengthen British rule in that country, than by the formation of the proposed system of railways in Central Asia, and the carrying out of the proposed telegraph communication with Europe. These are undertakings which are not only eminently calculated to promote the immediate objects in view, facility and rapidity of intercommunication, as also of connecting India with Europe by a means of communication the most extraordinary in its character of the present age, but also to assist most materially in bringing more prominently before public attention the very wide and lucrative field for enterprise of varied forms which the valleys of the Euphrates and Tigris, as well as the Indian Empire, offer to British capitalists, merchants, colonists, and others."

'Were any person (it has been most pertinently remarked) asked to point out the greatest proof and grandest monument of British power, genius, enterprise, perseverance, and constructive skill, he would most probably name our Indian Empire. Imagination can hardly picture anything more wonderful than that splendid aggregate of rich and populous kingdoms, acquired, subjected, consolidated, and brought by indomitable courage, by consummate art, by profound policy, beneath the benignant sway of the constitutional sovereign

of the British Isles. When one contemplates that vast territory, with its myriads of industrious inhabitants, its fertile fields, its flourishing cities, its various products, its countless treasures, and its inexhaustible sources of wealth, and recollects that all that is the fruit of fortunate commercial enterprise and well-directed practical ability, civil and military, one is at a loss to find words to express the magnitude of such an achievement. History affords no precedent of an empire of such magnificence constructed by such means, and brought within the dominion of a monarch, the principal seat of whose government is distant thousands of miles. British India stands alone in its majesty, the glorious monument of British commerce. Arms have undoubtedly done much, and diplomacy has done a great deal, but commerce has been the origin and the great constructor of this matchless dependency of the English crown. In reviewing the administration of the late Governor-General, Lord Dalhousie, his annexations, his acquisitions, and his policy, we recently had the opportunity of surveying, as a whole, the state and condition of our Indian territory, and of marking the extraordinary advance made by our heterogeneous Asiatic subjects towards civilisation. The President of the Board of Control, too, a few days ago, marshalled in detail the results of our Oriental labours, and made plain to every understanding that our policy had been triumphant, and our achievements, whether of peace or war, had been unparalleled. Officially vouched facts and incontestable figures establish beyond controversy that the march of improvement throughout our Indian dominions has been extraordinary, and that the material and moral progress therein made has been so rapid as to outstrip all precedent example. But two things were wanted to complete the work we have carried on thus far, and to accomplish that triumph over mind and matter, over natural obstacles, ignorance and prejudice, which it is our manifest destiny to secure

—the perfection of a direct railway system between England and India, and the establishment of an unbroken chain of electric communication, going straight from the head-quarters of Queen Victoria's government to every extremity of her eastern empire.'

"It ought not to be omitted, in considering the auspicious circumstances under which these great and public imperial works have been inaugurated, that the return of peace is not one of the least. Indeed, the circumstances under which the railway will be now constructed, steam navigation established, and telegraphic communication opened, are infinitely better than we could have found them to be if no Russian war had taken place. The relationships between the Porte and the Western Powers have assumed a totally new aspect since the Allies interposed to save the "sick man" from the designs of the Czar. The Turks have now abandoned their jealousy, and forgotten their bigoted contempt of Frankish visitors; while we, on our part, as we became better acquainted with the government and the inhabitants of the Ottoman Empire, have learnt to respect them more highly, and value them more, whether as allies or as customers. What is of immediately practical consequence as regards the establishment of railway and telegraphic communication with India, and of re-opening the navigation of the Euphrates, the counter-influence of Russia will be now unavailing; and we are now sure of obtaining all the facilities and co-operation which it may be in the power of the Porte to bestow. To use the words of the projector, Mr. Andrew, 'Now that the Temple of Janus is closed for a season, let us stamp on Asia the impress of our genius and our power: let us render the invasion of Asia Minor by Russia for ever impossible, by throwing open to the world, by the irresistible power of steam, the rich and forgotten plains of the Euphrates and Tigris — the once famed granaries of the East — and subduing to industry

their wild inhabitants. This would be a greater triumph than the recapture of Kars, and at once a colossal and enduring monument of our science and enlightenment, as well as of our energy and might as a people.'*

"When this is done, then, indeed, will time be vanquished and distance be overcome. Then will the civilisation of the West be spread in hourly currents over the East; then will the dream of the poet be more than realised, and to 'waft a sigh from Indus to the Pole' will be the simplest of performances. Laying aside all commercial advantages and political considerations, who has not a friend or relative in India to whom sending a message in a moment, at any hour of the day, would not be a most welcome privilege and advantage, which no money could adequately represent? Mr. O'Shaughnessy, the distinguished originator of the telegraphic system in India, tells us that the number of native correspondents in that country is increasing daily. Not only do they use the lines for financial business, but on the most delicate and secret matters, affecting family arrangements, betrothals, marriages, and other domestic affairs, of which they treat with an absence of all disguise which is almost beyond belief. Are the Turks, the Persians, the Arabs, or the Christian races, under Turkish or Persian rule, less intelligent and less likely to avail themselves of the telegraph than the Hindoo?† Contemplating the subject in all

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* Vide The Scinde Railway and its Relations to the Euphrates Valley and other Routes to India. By W. P. Andrew. W. H. Allen and Co., 7, Leadenhall Street, London. 1856.

† Those desirous of further information regarding the establishment of telegraphic communication between England and India are referred to the Prospectus of the European and Indian Junction Telegraph Company, the valuable Report of Mr. William Ainsworth, F.R.G.S., addressed to the Chairman of the Company, and the official Correspondence given in the Appendix.

its bearings, without any misgiving that imagination may be leading reason astray, we cannot but consider the projects now being inaugurated as among those mighty changes which are permitted at various epochs in the world's history to exercise a powerful influence over the destinies of the human race." *

Regarding the insidious movements of Russia towards the East, that eminent authority, Sir Justin Sheil, late British Ambassador at the Court of Tehran, makes the following pregnant and suggestive remarks in notes appended to Lady Sheil's recent and interesting volume, "Life and Manners in Persia"

"The Caspian Sea washes the coasts of the Persian provinces of Talish, Geelan, Mazenderan, Asterabad, and Persian Toorkomania. The inhabitants of these spacious territories carry on an extensive commerce, in part with the Persian ports on that sea, in part with the Russian districts on its northern and western shores. With a far-seeing policy, which anticipates all the possibilities of futurity, when Persia was gasping almost in the last throes, Russia humbled her to the dust, by forcing on her the renewal of a stipulation contracted at the treaty of Goolistan, by which she bound herself not to maintain any vessel of war in the Caspian Sea. Upwards of a hundred years ago an Englishman named Elton, a man of wonderful ability and resource, who had been brought up to a seafaring life, and who had previously been an officer in the Russian navy, was in the service of the Shah (Nadir), and not only commanded his naval forces in the Caspian Sea, but built ships for him on European models. The most unnautical nation in the world, with an Englishman as their leader, became dominant on the Caspian; and, as the author of the 'Progress of Russia in the East'

* Bentley's Miscellany.

says, '*forced the Russians to lower their flag,*' and the banner with the open hand* floated triumphantly through the length and breadth of the Caspian. To preclude a revival of this discomfiture, Persia was forced to sign her degradation, and the Caspian became a Russian lake. When the Czar rendered Persia powerless on this inland sea, he was heedless of the fact that the Toorkoman pirates of the eastern coast near the Goorgan and the Atrek were accustomed to make descents in their boats on the Persian shores, to kidnap the inhabitants and carry them into slavery. True, he was ready to make compensation, by sending his own vessels of war to 'protect' the Persian coast from depredation; but the real meaning of imperial protection is not unknown in Persia, and for a long time this proffer was regarded in the light of the Persian fable of the frog who invited the snake to guard his dwelling. Unfortunately an event occurred several years afterwards which placed them in the poor frog's predicament, and which, though not strictly bearing on the treaty of Toorkoman Chaee, as it refers to the Caspian, may be introduced here.

"The small sandy island of Ashoorada is situated in the gulf or bay of Asterabad, about twelve miles from the coast nearest to that city, which is twenty miles from the sea. In size it is about a mile and a half in length, and less than a mile in width. The water is deep in its vicinity; and its lee affords a secure shelter in a gale from any direction. Hitherto it has been uninhabited. Twelve or thirteen years ago it fell into the hands of Russia, by one of those protective processes of which we have lately heard so much. Its advantages as a naval station had not escaped the observation

* "The banner of Persia is surmounted by an open hand, of which the five fingers are said to express Mahommed, Ali, Fatma, Hassan, and Hoossein."

and cupidity of Russia. It commands the entrance to the bay, menaces that portion of the coast inhabited by the Yemoot Toorkomans, and intercepts the commerce with Mazenderan, on which the stationary tribes of that race chiefly depend for subsistence. The island possesses sources of sweet spring-water, together with a climate remarkable on that coast for its salubrity. The inner side has sufficient depth of water to float a brig-of-war, within a few yards of the beach. These are some of the inducements which led to the occupation of this spot of Persian territory by the Russian government, which act was perpetrated in 1841, immediately after the catastrophe of Cabul became known. At that time Persia was ruled by Mahommed Shah, a monarch of whose wisdom much cannot be said. He had for minister a man who was half mad and whole Russian. He was a native of Erivan, in Russia, and often proclaimed himself to be a subject of that empire. This was the notorious Hajee Meerza Aghassee, who, from tutor to the royal family, was raised at once to the vezeership. Russia was asked to lend Persia for a short time one or two small ships of war, to hold in check the Toorkomans residing between Asterabad and the Toorkoman settlement of Hassan Koolee, at the mouth of the Atrek. With the most amiable and neighbourly cordiality she replied that she would save Persia all trouble, and come herself to chastise the marauders. Two vessels of war forthwith appeared, and soon after established themselves at Ashoorada, from whence they have never since moved. Complaint and remonstrance were met by countercharges of ingratitude, and by indignant expostulation at this offensive display of distrust. It is not surprising that there should be a reluctance to depart. The position is a good one; for, besides overawing the Toorkomans, it also controls Mazenderan. The most complete possession has been taken of the island. It is covered with

residences, hospitals, barracks; and soil has been conveyed to it for the construction of gardens. In short, there is every evidence of permanent occupation and retention.

"The sea-going Toorkomans have been brought under complete control. Some have been sent to Siberia, or to Russia Proper. Not a boat is allowed to move without a passport, under heavy penalties, and even Persian boats are under the same restriction; this, too, on the coast of their own sea! Since the occupation of the island a consul has been placed at Asterabad, so that, with the consul on one side and the commodore on the other, Mazenderan also is on a hopeful road to protection.

"True, the incursions of the Toorkomans have nearly ceased. But the Persians say, and with justice, that an occasional chepawool of these pirates was less irksome than the presence and interference of consul and commodore.

"No attempt has yet succeeded for forming an establishment on the mainland among the Toorkomans. When the day for that arrives, the Goorgan will doubtless receive a preference. Its banks are on the highroad to Meshed, and are covered with the richest pastures; and the climate and the soil are suited for the production of abundant harvests of corn. No fitter spot could be found for subsisting an army, or for being made the basis of a plan of military operations to the East.

"The naval strength of Russia in the Caspian is not easily ascertained with correctness. It is believed to amount to four or five small steamers and a few brigs and schooners of war, the largest not carrying more than eighteen guns; but her supremacy is as complete as that of England in the Irish Channel."

"For more than a century Russia has been aiming at the possession of Khiva. Twice she has failed in attaining her object by force, by open force. The next attempt will pro-

bably secure the prize. Dissension at Khiva, steamers on the Aral and at the mouth of the Oxus, a fortress at the Jaxartes, invite an attempt and promise success.

"England has some concern with the establishment of Russia in this principality. There she would be inexpugnable. She is within two hundred miles of the Caspian, a space which, to minds accustomed to the vast distances of Asia, is as nothing. A Persian soldier thinks little of a march of one thousand miles from Azerbijan to Khorassan. Master of Khiva, the Russian government becomes supreme over the Toorkomans, and will find no insurmountable difficulty in establishing through the intervening level tract a permanent and available communication with the Caspian Sea. The noble river Oxus, navigable to within a hundred miles of Hindoo Koosh, becomes Russian, and is covered with Russian steamers. At his choice the Emperor can fix the boundary of his empire on that river, for who is there to gainsay him? Khoolloom and Koondooz will doubtless then become the limits of the Russian dominions. The trade between India and those countries, now free and uncontrolled on the payment of not immoderate duties, falls then under the despotic rule of that government, and becomes subject to its protective and selfish commercial restrictions. Her near neighbourhood is not likely to strengthen our position in North-western India. And yet it seems impossible to avert these evils, or to prevent the downfall of Khiva, or its eventual occupation by Russia. Can nothing, however, be done to save the Oxus, to save at least the portion approximating to Affghanistan?"

"Without undertaking to decide the large question at issue (the invasion of India by Russia), I shall assume the feasibility of invasion to be established, and merely observe that now more than ever should we be on the watch, for the Russian and Indian dominions are twelve

hundred miles nearer to each other than when the invasion of Affghanistan took place. Excluded from prosecuting her ambitious objects in other quarters, revenge, the desire of retrieving her prestige, all conspire to urge Russia to the East. She will await the favourable moment in patience, moving forward in the mean while by the wiles she is reputed to understand so well. On this occasion she has been opposed by four combatants; next time these conditions may be reversed. Let it not be forgotten that, when her railroads to Odessa and to Vladikafkaz are completed, her strength, particularly towards the East, will be doubled."

"Jonas Hanway says, 'the situation of Candahar renders it a strong barrier between the empires of Persia and India.'

"The town of Candahar commands the three roads to India: that by Cabul, by Shikarpoor, and the sterile routes across the Suleina range to Dera Ismaël Khan and Dera Ghazee Khan, on the Indus.*

"The above city is situated in the most fertile part of Affghanistan, in plains abounding with wheat, barley, and other grains. Here it is practicable to provide for the subsistence of an army during a certain time. It should be our care to secure these resources from being available to an enemy."

"The distance between Candahar and our outposts does not exceed 200 miles.† If the abandonment of this position is deserving of regret, its resumption should form an object of early effort. Established here, we may almost set invasion at defiance. A Gumri, a Sebastopol, in this spot makes us paramount, for it will be an announcement to all the world that the determination to remain is irrevocable."

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* "There is a mountain road from Herat to Cabul, but it is described to be impassable for guns, and to be through a thinly-inhabited country, consequently to be deficient in food."

† "It is assumed that Dader and Kelat are our frontier stations."

"Our taking up a formidable position at Candahar will go far to deter even speculation on the chances of invasion.

"The cost of the plan offered for consideration, and the drain on the already encumbered resources of India, deserve reflection. Yet present expenditure is often real economy, of which the war we are now waging is a notable example. It seems to be a national vice to prefer the most lavish outlay in prospect to present moderate disbursement. Whatever tends to avert an attempt to wrest India from our hands, and prevent the enormous consequent expenditure, is economy."

"Russia may be said to have already announced that she is even now preparing for her next encounter with Great Britain. Her railways have no other end than to transport troops. She found that in the last struggle her weakness lay in the impossibility of collecting her forces at the proper moment on the distant points of her empire. This weakness she has intimated shall disappear. But we, too, will not remain idle. Our railways in India will advance as well as those of Russia. Established and prepared in Candahar, *with a railway running the whole length of the left bank of the Indus, we may await any attempt in calmness.* The Russian grenadier now knows his inferiority to the English soldier. The Cossack will find a match in the Hindoostanee horseman."*

What a blessing would it be to Europe, and to the entire world, as well as to her own incalculable interest and happiness, if Russia, instead of seeking to aggrandise herself at the expense of other nations, would but honestly and steadily turn her attention to the improvement of the means of internal communication throughout her vast empire, to the arts of peace, to agriculture, to manufactures, and to commerce.

* Glimpses of Life and Manners in Persia, by Lady Sheil. With Notes on Russia, Koords, Toorkomans, Nestorians, Khiva, and Persia. John Murray, Albemarle Street. 1856.

Sua si bona norit! what a rich, powerful, prosperous and happy nation she might become; but such hopes are idle.

With regard to her future policy and its indications, according to the continental journals supposed to be in her pay, she has demanded permission of the Porte to allow ten vessels of war to pass the Bosphorus, *en route* from the Baltic, in order to meet the exigencies of the Circassian war; while it is also asserted that the gun boats from the sea of Azof have been transported by the route of the Don, and Junction canal, and the Wolga, to the Caspian Sea; while information has arrived at St. Petersburg that the whole line of water communication has been completed between that capital and the sea of Okotsk, opposite Japan.

These things are unmistakeable indications that the great meshes of the spider's web are again spreading their hold over almost every part of the globe.

Advices from St. Petersburg furnish the details of the recent subsidies granted by the Russian Government for the formation of steam companies in the Black Sea and elsewhere. They will amount annually to between 400,000*l.* and 500,000*l.*, the line to Alexandria alone receiving 50,000*l.*, besides other privileges. The total capital to be employed is 2,000,000*l.*, and the shares, which were all taken up immediately, command a premium. The vessels are all to be built to carry guns "if necessary," and the movement is regarded by many as a clever mode of creating and maintaining a navy so as to evade the treaty of Paris. Some of the lines, it is observed, are obviously such as could never have been formed for legitimate purposes of trade, and the cry is that Russia will now get effective ships for political purposes at a cheaper rate than if they were avowedly in government service.

According to the treaty of peace, Russia is only to have

a certain number of vessels of war in the Black Sea; but the new Steam Navigation Company will have 26 post steamers, 6 other steamers, 10 tug steamers, and 20 barques. The crews of these vessels are to have the same uniform and discipline as the sailors who are in the Imperial service.

The mouths of the Don and the Volga must be some 400 or 500 miles apart, and to effect a junction between them would involve an enormous cost, even if it could be effected at all; but the project of uniting the waters of the Caspian with those of the Euxine by means of a canal was first started in the reign of Peter the Great, if not by himself: and it was Paul's intention to have undertaken the work, for which Perry, an English engineer, had been employed by Peter in taking the preliminary steps, surveying the best line, &c.

The intention was, and it has never been abandoned, to follow the natural courses of the Don and Volga to points where they approach each other to within some fifty miles; and there, in the intervening ground, taking advantage of the river Lafla, which flows into the Don on the west, and of the Kamisinca which runs into the Volga on the East, to cut a ship canal between these two rivers. This need not be more than two and one-third miles in length: and then by means of locks, and by deepening, widening and straightening these two tributary streams, the passage between the two seas would be effected.

Clarke, who travelled over that part of the country in 1800, says, " a work like this would not long be in agitation in England."

At Tzaritzin, the Volga and Don approach each other to within forty miles or so, but the intervening ground is stated to be hilly.

The entire length of the navigation between the two seas,

up the Volga along the Kamisinca and Lafla, and down the Don, would be at least 800 miles.

The junction between the Caspian and the Exuine has been effected, although the exact route is not shown.

The Caspian and the Baltic are already united by a canal between the rivers Tvertza and Msta at Vishnei Voloskh; the length of the navigation being no less than 5,000 versts or 3,334 miles. Now, however, that the line of railroad between Petersburgh and Moscow cuts the canal, as well as the Volga, no doubt the greater portion of the traffic has been diverted from the water, into the iron, channel.

Of the facilities which railways will afford to Russia in future aggressions little need be said. "It is impossible not to apprehend that, while railways in other countries rapidly diminish all tendency to warfare, the contrary prospect must, in the case of Russia, be taken into account."

On this subject the following letter was recently addressed:—

To the Editor of the Times.—"Sir,—I write to evoke your warning voice against the drain which the great capitalists are preparing for us by an extension of the railway system in many parts of Europe. I allude more particularly to the announcement from St. Petersburgh regarding the concessions of the new railways of Russia. A short time back it was pretended they were to be made with Russian capital. Let it be so. Use your influence to that effect; discourage our speculative public from swallowing the gilded bait which the millionaire anglers of Paris and London will no doubt soon offer them. Tell them in your own way to reckon the cost,—a demand for gold, straitened means, inability to promote legitimate undertakings at home, and the placing Russia in a position,

when we are again opposed in arms, to command the one thing wanting in the late war—the ability to move her troops with facility to distant points of her vast empire, and thus to facilitate her known aggressive policy against our Indian territories.

"Remind them that every shilling of English capital so expended in Russia strengthens her at our cost, while the rich bankers of St. Petersburgh will ultimately be the only parties pecuniarily benefitted by the speculation.

"If after we have given support to the legitimate claims for home investments, where every pound fructifies for our national advantage, we have enough and to spare, *let us look to Turkey, whose advancement is our safeguard—whose fields for British enterprise are, by the unanimous voice of all who have visited that important country, pronounced to be unequalled by any other in the world.*

"True, there is much to contend against at present in the religious prejudices of the people, their want of business habits, and the unfortunate jealousies which divide their rulers; but all these must give way ere long, and their natural sagacity will not be slow to discover the immense advantages which a close alliance, political and commercial, will certainly secure to them, while it will not be less beneficial to ourselves."

"In Russia alone," says another correspondent of the same paper, "I believe, of all the countries in Europe, sea-borne iron is absolutely prohibited, simply with the object of preserving an entire independence of this country for an article of such necessity. The Czar has chosen to fetter the energies of his own subjects, and dwarf every department of industry in which they could labour with effect, rather than resort to us for the talisman which would unlock the resources of his country. These new railroads—if, indeed, the 'concessions' be anything more than a puff-apple

of discord, thrown by the Muscovite Até, to disturb the happy union of France and England—will only prove another futile attempt to combine the advantages of civilization with a policy of barbarism. To make bricks without straw was not a more difficult task than it will be to establish a system of railroad communication in Russia under a prohibitory tariff. Whatever the magnates of the Parisian Bourse may choose to do, I hope the British public will open their eyes to this fact; in which case there will be little fear of the power of our late enemy increasing, until an entire change of financial policy shall have deprived him of the wish to abuse it."*

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* Lord Granville having been asked by the Emperor Alexander if he had seen all the curiosities of Moscow, and having replied affirmatively, was surprised by the Emperor's suggestion that the greatest curiosity then in Moscow was in his private cabinet. It turned out to be "the little bill" his father Nicholas had paid for the St. Petersburg and Moscow Railway. And, no doubt, the cost of that line was enormous, notwithstanding the serf and military labour employed—quite as great per mile, it is believed, as the dearest of English railways; and now, when finished, it is worked under a contract with Americans, which gives the Imperial Government little or no return on "the little bill" the Emperor mentioned to Lord Granville.

That "little bill" seems, however, to have made a very deep impression on the Czar.

" Those who have been rendered uneasy by apprehensions that the Russian Railway project would draw off money from this country, will, no doubt, find their apprehensions allayed by the latest accounts of the scheme. At last its true character, which we always suspected, stands disclosed. Under the guise of commerce, Russia is trying to get military rails, and not having money to pay for them, Russia is asking Western Europe to pay the piper for her regiments on any future march towards the Black Sea. Now, a few persons *might* be found, in London even, who would be quite willing to contract for the payment of the Russian piper aforesaid, if the piper would return them a per centage on their money; but whoever heard of a regimental piper paying dividends?"—*The Globe.*

While these pages are passing through the press, a good picture has been drawn of the Protean policy and aggressive designs of the huge, subtle and rapacious spider of the North:—

"The reputation of Russia has gone through three several phases during the last four years. At first she appeared highly politic and highly formidable, ready alike with force or fraud, bullying the weak and overreaching the strong, with one inflexible purpose always in view, to which every other thought and consideration was sternly subordinated. That she might domineer over Germany, threaten Turkey, and terrify Persia, Russia was content to cling to an obsolete commercial system, to keep her people in slavery and indigence, and to sacrifice the plough, the loom, and the hammer to the undisputed supremacy of the sword. War came, and showed the Russian character under nobler and more elevating influences. Instead of the spirit of aggression, we have the spirit of patriotism, instead of foreign invasion the defence of home, and we beheld, not without respectful admiration, a great nation struggling desperately against the almost insuperable obstacles which her own defective organization had raised against her, and almost supplying by prodigious efforts and sacrifices the want of the appliances of modern science, and of those aids which the arts of peace must lend to the arts of war. Russia has now entered into a third and entirely novel phase of development,—

> 'The bustling vigour and rough frown of war
> 'Is cold inanity and painted peace.'

She has been forced to yield because her means of transport were exhausted, because her armies perished in interminable marches, and all the resources that she had stored up for the destruction of a barbarous enemy proved inefficient against the hostility of nations better organized and better civilized.

The genius of barbarism looked civilization in the face, and was rebuked before her.

"It might have been expected that a loss which had been sustained without disgrace would have been borne with dignity, and that Russia, yielding to an inevitable destiny, would have turned her whole attention to the arts of peace, and left those who were victorious in the conflict to play undisturbed the most prominent part on the public stage. But those who expected this knew little of the character of the Russian Government. A profound dissimulation bears no inconsiderable part in the policy of this semi-oriental people. Having been defeated, the first and dominant idea of Russia seems to have been to pretend that she has not." "She has seized, without a colour of right or justice, upon the Isle of Serpents, and has only been counteracted in her attempts by an occupation by the Turks in greater force than her own. She was bound to deliver up to the allies the fortresses of Kilia, Ismail, and Kars. The conditions were performed by dismantling and destroying the fortifications and delivering over the ruins to the allies. Russia was pressed to rectify the frontier of Bessarabia. By the production of maps wilfully falsified she entirely misled the Congress of Paris, and induced them to assent to a frontier impossible and inexplicable. The six months fixed by the treaty have expired, and most of the conditions imposed upon Russia are as yet unperformed. In addition to this, she has issued an insolent and even threatening manifesto, in which she warns the allies to desist from their attempts to improve the condition of Naples, and even hints at a recourse to ulterior measures if her remonstrance be not attended to. As if all this were not enough in the way of paltry vexation and safe bravado, Russia is now about to send a squadron to the Bosphorus, in order to take advantage of the wrong she has already committed to perpetrate a fresh wrong. Because she has not

performed the conditions imposed upon her by the treaty the allies have been compelled, much against their will, to keep their fleets in the Black Sea; and because their fleets remain in the Black Sea, owing to her default, Russia is, we are informed, about to demand from Turkey that her fleet should also be allowed to enter those neutral waters."

"There never was a moment when the people of this country were less disposed to be trifled with, and Russia may have, unless she awake to wiser counsels, to buy the false *éclat* of her present demonstrations at a price which she will be alike unwilling and unable to pay. Our resources are untouched, our spirits are unbroken, and having once made a treaty we will not suffer ourselves to be held up to ridicule as unable or unwilling to enforce its conditions. We only hope that this dangerous game will be carried no farther. We have asked nothing but what is fair and reasonable; and what we have asked we are thoroughly resolved to obtain. We have been obliged on one occasion to undeceive foreign nations as to the extent of our devotion to peace. It is by no means impossible that we may be called upon to repeat the lesson."

In the emphatic words of Lord Palmerston,—" 'The duration of peace must depend upon the honour and fidelity with which its conditions are fulfilled. I trust that that power which brought upon itself the hostility, either active or moral, of all Europe by a forgetfulness of international rights and duties,—I trust that that Power, having concluded a treaty, will observe that treaty with faithfulness, *and then, no doubt, peace will be of long duration.*' Memorable words—well weighed, and gravely uttered,—words honourable to the Minister who speaks them, and sure to be supported by the unanimous concurrence, and, if necessary, by the equally unanimous action, of the nation to which they are virtually addressed."

Of all the lessons which the late war has taught us, there

is not one more important than this, that henceforward the moral superiority of nations must be based upon an exact knowledge and intelligent use of the mechanical forces of nature. A vague presentiment of this most fundamental revolution in human affairs has long existed amongst us, but it has had to struggle against manifold opposition, against the traditional policy of the schools, against the instinctive timidity of a large and respectable class, who shrink from anything which appears to them like an exaltation of the material over the moral and spiritual part of our nature. It was to our interest to get rid of the very remnants of these delusive feelings. It seemed accordingly necessary, at a particular crisis, that we should pass through a brief but sharp ordeal, whereby the true secret of our continued supremacy might be brought home with irresistible force to the most reluctant mind, that all might brace themselves anew for a more determined progress in the great and glorious career that is expanding before us as a nation.

Since the termination of the recent struggle, we have seen with certainty where the power of our antagonist first gave proof of weakness, and forced him eventually to desist from the further prosecution of his audacious schemes. He had built up fortresses of colossal magnitude, collected resources astonishing from their variety and abundance, his generals were selected with consummate skill, while over the persons and property of his subjects, he exercised an unchecked control. But the force of an absolute will, with all these appliances at command, could not counteract the primary disadvantage of defective means of transport and tardy methods of communication. Could the ruler of all the Russias, in the late encounter, have whispered his commands with lightning speed to every corner of his vast empire, and transferred his instruments to any point with that celerity which science places at our disposal, we know full well how

much more desperate would have been the contest, how much harder would have been our victory.

Let us not think that the grounds of this superiority vanish with the cessation of hostilities. The argument is equally applicable to the quieter strife of civilisation. In the necessities of external diplomacy, in the exigencies of internal Government, in the intricate combinations of a multiplying commercial intercourse, the most eminent success will result to those in whose hands are the means of the most precise and rapid communication. The interests of war and peace are in this matter identical, and equally urge us to press onward to improvement.

One of the noblest characteristics of the Roman Empire, and that which probably contributed beyond all others to the duration of its power, as well as to the beneficent influence the great political colossus exercised over the ulterior destinies of the territories once subjected to its sway, was its habit of constructing admirable highways, extending in every direction, from the capital to the most distant provinces. What the genius of Alexander had conceived, Rome may be said to have accomplished, the effective union of the entire civilised world by roads, connecting its widely-separated and once almost isolated kingdoms. The far-seeing wisdom of the policy which dictated such an expenditure of labour, is universally acknowledged by modern statesmen, and it is to be regretted that their appreciation of it has not led to a more perfect imitation of this course of the model state of antiquity.

Lord Palmerston observed the other day at Liverpool that "it was the remark of Mr. Burke, when discussing the operations of the American war, that it was difficult to carry on a war when seas rolled, and months intervened between the order and the execution."

The railway and telegraph are not only of incalculable

value as political instruments, but they are the pioneers of enlightenment and advancement: it is theirs to span the gulf which separates barbarism from civilisation; and his is an enviable lot, by whose exertions, the arts and industry, the capital and enterprise, the knowledge and humanity of Western Europe shall be familiarised and brought home to the dwellers in the East.

A railway along the Euphrates connected by efficient steamers in the Persian Gulf, with a railway along the valley of the Indus, would not only open up new worlds for our civilisation and our commerce, but the veteran armies of India might then be wielded with a rapidity and force that would be felt in Europe as well as Asia, at St.-Petersburgh as at Teheran.

"There never was a crisis in the history of this country when the public mind was more keenly alive to the necessity of developing the territorial value of India, and of approximating, by a rapid means of communication, the distant limits of that vast empire.

"At this moment, all who are alive to the inestimable importance of British India, knowing as they do that its possession is essential to the grandeur and prosperity, if not to the very existence of this country, have watched with painful interest the varying fortunes of the campaign against the Russians in Asia. The events of this campaign are fraught with results of immeasurably greater import to us than to our allies. *They* have no great Indian empire, and Asia Minor is not the route to any of their possessions. Between the outer limits of Asia Minor and the borders of the golden peninsula of India, as well as within the bounds of the peninsula itself, the rulers and tribes accustomed to the dominion of the sword yield a scant allegiance to a sovereign they have ceased to dread, and little respect to a neighbour whose might is not superior to their own. Much is being done

to enlighten and advance the people of India and develop the latent resources of that country; but, as yet, we hold with a mailed hand our empire in the East. It is dangerous to let our subject populations or our unsettled neighbours think that we have an equal in the field, much more a superior, and that superior, Russia, so long and so notoriously a candidate for their suffrages.

"In these days, the connection between events in the East and in the West is far better understood than it was at the beginning of the present century, and news travels infinitely faster; but even at the beginning of the present century, we may remember that it was the superiority of the arms of France in Europe that induced Tippoo to rise against us, and led to the contest with him which ended in the taking of Seringapatam. Indeed, there is no one who really knows India that is not aware how greatly even the extremities of our empire there are agitated by the slightest appearance of a reverse in any quarter, so sensitive is the bond by which those vast subject populations are held.

"We did not relish the idea of the Czar at Stamboul, and we may find his influence not quite agreeable at Teheran; neither must we close our eyes to the fact, that Persia is insidiously and perseveringly advancing her outposts both in Central Asia and along the line of the sea-board of the Gulf of Oman. She has already taken Herat, formerly regarded as the key of India, from the Affghans, and has wrested Bunder Abbass in the Persian Gulf from the Imam of Muscat.* Had the British minister at the Persian

* In the beginning of December, 1854, the seaport towns of Bunder Abbas, belonging to the Imam of Muscat and governed by his son, was attacked by a force of about 12,000 Persian horsemen, with two mortars and six guns. For two days and nights a heavy fire of shot and shells was kept upon the fort, and the garrison, about 1,700 strong, finding this too hot for them on the third day, sallied out under command of the

court been under the *immediate* orders of the Governor-General of India, the Shah would speedily have recoiled before the remonstrances of an authority backed by 300,000 men. We do not fear a Russian invasion of India, but we must guard our prestige of invincibility with the treacherous and semi-barbarous courts of Asia, as the best means of protecting our Indian dominions from the dire effects of internal commotions, and from the hostile incursions of the turbulent and warlike tribes on our north-west frontier. While the ancient seat of empire of the Cæsars in the East is in the hands of the soldiers of the West, and while British enterprise is surely, though gradually, adding the Sultan's empire to the area of its wide exertions, his dominion in Asia Minor, and our name in the East, have received a shock by the capitulation of Kars. 'We owe India a victory in Asia;' we owe it a victory that shall efface from the standards of Russia the record of our heroic misfortunes at Kars. But now that the Temple of Janus is closed for a season, let us stamp on Asia the impress of our genius and our power;—let us render the invasion of Asia Minor by Russia for ever impossible, by throwing open to the world, by the irresistible power of steam, the rich and forgotten plains of the Euphrates and Tigris—the once-famed granaries of the East, and subduing to Industry their wild inhabitants. This would be a greater triumph than the re-capture of Kars, and at once a colossal and enduring monument of our science and enlightenment, as well as of our energy and might as a people.

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young prince, and met them at the gates. A battle of several hours ensued, when the Arabs, seeing that they were overpowered by numbers, betook themselves to their boats and found refuge on board a Muscat man-of-war at anchor outside. A large proportion of the garrison had been either killed or wounded.

" The Indian army has not only fought the battles of England in India and Central Asia, but the sepoy of Bengal and Madras has crossed bayonets with the best soldiers of Europe, in Java and the Mauritius, while their brethren of Bombay marched to oppose the same gallant enemy in Egypt. Notwithstanding this, our tried and magnificent army in India has been practically ignored in the late war.

" There is now in India an army of nearly 300,000 men at the disposal of this country, apart from 31,000 subsidiary troops and contingents from Native States. In that army, there are about 26,000 Europeans belonging to the Queen's service, including cavalry and infantry of the line; and 15,000 European troops in the Company's service, of every arm except cavalry, and 240,465 native troops. This last figure includes 233,699 exclusively native troops, together with 3,644 European commissioned officers, and 3,122 European warrant and non-commissioned officers and rank and file. The number of the commissioned officers of the Queen's troops amounts to 588. The police corps regularly organised consists of 24,015 native commissioned and non-commissioned officers and privates, and 35 commissioned European officers. Large and costly as this army may be, it might easily be increased, especially from the warlike tribes lately added to our dominion. Here, then, is a reserve, and an ample reserve, well organised, officered, and generally with some experience of war. How could it be said that we had no reserve? Of this immense force, 40,000 are British soldiers. Of the rest, the irregular native cavalry is just the force we most required in the late war, and could not supply from home. Here, then, is everything that we have ascribed to Russia.

" 'All former empires that ever pretended to hold distant

countries in subjection made a fair exchange of armies, so that while Italians were holding Britain, or Numidia, or Dacia, Britons, Numidians, and Dacians were stationed in Italy, and even supplying candidates to the imperial purple. Whatever the final results, the Roman empire would not have lasted ten years without that interchange.' Russia carried on the war with forces drawn from the heart and extremities of Asia, as well as from the most northern shores of Europe; and when we talk thoughtlessly of her overpowering population, it is these distant regions that we are unconsciously thinking of. 'Our case is the same as Russia's, only we have not got the sense to see it, and shall not see it till our eyes have been opened and our wits quickened by a succession of disasters.'

"The mutual dependence of our Western and Eastern empires was clearly pointed out many years ago in these words: 'In case our enemies should prove sufficiently powerful to press us hard either in Europe or Asia, it would be a matter of inestimable importance to have it in our power to transport our military forces from Europe to Asia, and from Asia to Europe, with the greatest possible celerity, as the exigencies of war may demand. A rapid means of communicating between India and Malta, both by means of the Red Sea and of the Persian Gulf, through Egypt and through Syria, would multiply tenfold the resources of Britain, and secure the defences of our possessions from Canada to Hong Kong. Indeed, England, with her small standing army, with her population not trained and disciplined to defend their own territory against invaders, and with ministers who neglect her navy, can never be duly secured against the sudden attacks of her rivals and enemies, until she can impose some restraint on their ambition, by having it in her power to array the sepoy on the shores of

the Mediterranean, and the Highlander of Scotland and the gallant sons of Erin on the banks of the Indus and the Ganges, with a degree of speed which no other power can equal. The small amount of our military force, in comparison with the enormous extent of our empire, must be counterbalanced by abundant means of communication and extraordinary rapidity of transport.' *

"Russia, aware of the mistake she committed in going to war with imperfect means of transit, is, with *our money*, about connecting the shores of the Caspian, the Black Sea, and the Baltic, with the heart of the empire by means of railways communicating with her navigable rivers.

"In America, ten miles of railway are on the average opened every day for the accommodation of the regular traffic of the country.

"And shall we, while enriching with railways Russia, America, France, Italy and Austria, forget what is due to India with her boundless resources and vast population?

"It is evident that to have the benefit of even the moral weight of our magnificent and well-appointed army in India, on the great events which are now in progress, and of the consequent changes which must necessarily flow from them, that we must have, above all things, increased facilities for moving troops and stores upwards or downwards along the line of the Indus, as well as up the Persian Gulf, or to the Red Sea, as circumstances might render necessary.

"While these pages are passing through the press, the shadow of coming events in the East is deepening and extending, and it becomes more emphatically the duty of this country to make their army in India, by proper means of transit, not only sufficient for the internal peace of that

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* On the Communications between Europe and India, by George Finlay, Esq.: Smith, Elder and Co., 1847.

country, but that some portion of it should also by the same means, be made available wherever and whenever the welfare or the honour of the paramount state might demand its service. There never was put forward a greater fallacy, or an error more likely to be mischievous, than 'that the Turkish question was of no importance in an Indian point of view.' The grand problem, now in course of solution in Turkey, must affect in its results, whatever they may be, in the most immediate and powerful manner, our power and prosperity in India.

"Every act in the great drama of the war, has elicited either the apprehension or the applause of the nations of the East.* In the mosques of Bokhara, five thousand Moolahs prayed daily for the success of the Sultan of Room, and 'the

* "Dera Ismael Khan (on the upper Indus) has not been far behind Lahore in celebrating the fall of Sebastopol. The official news was received with the greatest enthusiasm by all classes, and the inhabitants resolved to have illuminations, fireworks, &c. The bazaars of the city were brilliantly illuminated; every shroff, or wealthy shopkeeper, displaying from 1,000 to 1,200 lamps before his shop, and all other shopkeepers from 200 to 300 lamps."—*Lahore Chronicle.*

On the 3rd of December last, the day appointed by the Governor-General for a general thanksgiving on account of the fall of Sebastopol, the great Parsee community (of which Sir Jamsetjee Jejeebhoy is so justly regarded as the leader and ornament), *spontaneously* assembled in the Town Hall at Bombay, and Dosabhoy Framjee read a lecture detailing the events of the war and the successes of the allied forces. He then proceeded to enlarge on the blessings which the British rule secures to the natives of India; and concluded his address by offering, on behalf of his crowded audience, the first public prayer to Almighty God ever uttered by a Parsee in his native tongue; for the ordinary religious services of the Parsees are still performed in the *Pehlevi*, their ancient language, which in the course of ages has become quite unintelligible to all but the very learned. He prayed, "that the shadow of the Almighty might rest wherever the British rule extends, and that its moral influence might be established over a still greater portion of the globe; that God would bless their Sovereign, and give success to her armies; that his

name of *Mouravieff* is probably now repeated with awe by the Persian and Affghan.'

"The Eastern shepherd, in his solitude, pondered over, and the warrior in his fastness, watched with kindling eye, the varying fortunes of the field, while every incident of the campaign, whether in Europe or Asia, has been minutely discussed, and will be well remembered in the bazaars throughout the length and breadth of India."*

By establishing a steam and electric connection between England and India and the confines of Central Asia, not only would the power and control of England be enhanced over her 150,000,000 widely-scattered subjects, but a great and glorious step would be taken towards securing the progress, the freedom and the peace of the world.

But, viewing the establishment of a railway from the Mediterranean Sea to the Persian Gulf merely as a com-

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own brethren might live, as they now do, in perfect security, and be ever impressed with a grateful sense of the blessings they enjoy under the benign rule of their gracious Queen."

The address was received with enthusiasm by the meeting, which signified its hearty acquiescence in the concluding prayer. The event marks an era in the annals of India. Instances are not wanting of sovereigns who have enjoyed an extensive popularity among the varied races of Hindostan ; but her history furnishes no parallel example of a whole people thus rising above the prejudices of ages, and in a way so opposed to their usual apathetic movements in political matters, convening a large public assembly, to give spontaneous expression to their belief in the superiority of British rule, and in the power of its protection, while they invoked the Divine aid for the success of its arms.

The novelty and gravity of such a meeting as has been just described cannnot fail to make a wide impression throughout Asia most favourable to the British character.—*From a Memoir of Sir Jamsetjee Jejeebhoy, by T. W. Ramsay, Esq., late Commissioner of Revenue, Bombay.*

* *The Scinde Railway and its Relations to the Euphrates Valley and other Routes to India, with Illustrative Maps, Statistical Tables, &c., from Official sources. By W. P. Andrew: W. H. Allen & Co., Leadenhall Street.*

mercial undertaking, the enterprise possesses, in the opinion of those personally acquainted with the country and its resources, all the elements of a highly remunerative character, and its advantages may be briefly recapitulated.

1st.—From the country presenting great facilities for the construction of a railway, being chiefly a succession of extensive plains.

2nd.—From the neighbouring mines of Marash, having supplied iron in abundance to the Euphrates expedition; they would provide facilities for the construction of the railway; an inexhaustible supply of timber of the finest quality for building purposes, sleepers, &c., being obtainable from the forests near the old Port (Seleucia) and Scanderoon: and from there being also large quarries of stone on different parts of the line, with an abundant supply of bitumen and timber for fuel.

3rd.—From the first section of the line, from Seleucia to Aleppo, being of moderate length, and complete in itself, having a port on the Mediterranean at one end, and the chief emporium for the trade of the country at the other.

4th.—From the line from the Mediterranean to Aleppo, forming of necessity the most important portion of any system of improved transit, which shall follow the course of the valley of the Euphrates, or the plains of the Tigris to the Persian Gulf.

5th.—From the clearly proved statistical returns of the former trade and commerce of the country, its vast natural resources and manufactures, and the extensive transit trade which was formerly carried on between China, India, Persia, Armenia, and Arabia with Europe, and especially with Great Britain, which has been greatly diminished by the policy of Russia, but which would speedily be revived, and from the conviction that the commerce of Great Britain with Central Asia, China, &c., instead of seeking, as at present, a costly

and circuitous route by the Volga and the Caspian, would return to its natural, its most direct, and its most ancient channel.

6th. — From official statements recently published the existing trade of the countries proposed to be traversed is very large and steadily increasing, notwithstanding the expense, delay and difficulty in the present mode of transit.

From the paramount and acknowledged importance of this route to the good government and prosperity of the Sultan's Asiatic dominions, those more immediately interested feel assured, from the negotiations now pending, of obtaining from the Sublime Porte such terms as will enable them to raise the necessary capital; and, from the obvious political and commercial importance of this, the most direct route to our Indian possessions, they have received from Her Majesty's Government and the Honourable East India Company that countenance and co-operation, which is essential to the carrying out, with success, a means of communication which would diminish, by more than a thousand miles, the distance between this country and its empire in the East.

This route, constituting as it does, the key to our Indian possessions, and commanding the right flank of the Turkish empire, will not be allowed by apathy or incompetence on our part to fall into the hands of any other power. There is no fear of such an injury being inflicted—it would never be forgotten or forgiven. The opening to the world the route between Europe and India by the Euphrates Valley, is no ordinary enterprise, it embraces in its scope the well-being and the hopes of nations, the stability of empires, and demands and requires the cordial and active co-operation of the English people, as well as of English statesmen.

APPENDIX.

PROSPECTUS.

This Company is established to connect the Mediterranean and the Persian Gulf by a railway from the ancient port of Seleucia by Antioch and Aleppo, to Ja'ber Castle on the Euphrates, and afterwards from thence by other towns, to Bagdad, and on to the head of the Persian Gulf. Thence by steamers communications will be established with all parts of India.

From arrangements now in progress, it is intended (by the European and Indian Junction Telegraph Company) to carry the electric wire along the Euphrates Valley, and connect the Telegraphic system of Europe with that of India.

The country through which it is proposed to carry the railway, was by command of his Majesty William IV. examined and surveyed, with the view to the introduction of improved means of transit by that distinguished officer, Major-General Chesney, R.A. and F.R.S., who reports that there are no serious difficulties to contend with; and subsequently scientific investigations under Captain Lynch, C.B., and Commander Campbell, both of the Indian Navy, as well as by Mr. W. Ainsworth, the geologist and geographer, have confirmed the accuracy of General Chesney's opinion. Dr. James Bowen Thompson, who lately died at Constantinople, spent many years in the East collecting data, and obtained for the project the favourable consideration of the Sublime Porte, Her Majesty's Government, and the British Ambassador at Constantinople.

The effect of the proposed contract to be entered into between the Sublime Porte and this Company will be,

that the Ottoman Government guarantee a minimum dividend on the capital required at 6 per cent. per annum for 99 years.

The Ottoman Government grant a lease of the land necessary for the Railway and works for 99 years, free of charge.

On the opening of the Line, all net profits, exceeding the rate of dividend guaranteed, are to go to the Ottoman Government in liquidation of the dividends they have advanced. When this advance is repaid, the entire surplus goes to the Shareholders.

No call will be made until the concession has been secured, by the Firman of the Sultan, and the other arrangements contemplated by the Directors completed.

At the expiration of 99 years, the land with the Railway and works pertaining thereto, will become the property of the Ottoman Government, who will at the same time purchase the rolling stock at a valuation to be settled by arbitration.

The Ottoman Government guarantee the Company against all competition from works of a similar character—And grant the right of lands, woods, forests, and quarries, the property of the State, at a certain distance at each side of the line.

It is only proposed at present to execute the first section, about eighty miles of railroad, from the ancient port of Seleucia on the Mediterranean, to Ja'ber Castle on the Euphrates; below which point, there is water communication by the Euphrates and Tigris to the Persian Gulf.

Mr. John Laird, of Birkenhead, has undertaken to supply the Sublime Porte with steamers to navigate the Euphrates, capable of carrying a large amount of passengers and merchandise, at a good rate of speed.

A steam route being thus established between the Medi-

terranean Sea and the Persian Gulf, the shortest and most rapid means of communication between the capitals and emporium of the West and East would be at once open for political and commercial purposes. The future sections of the Line will be gradually carried down the valley of the Euphrates, from the right bank opposite Ja'ber Castle to Phumsah, the ancient Thapsacus. Crossing into Mesopotamia at this suitable place, the railway will be carried along the valley by Anah and Hit to the environs of Bagdad; and thence by Babylon and Hillah to the confluence of the Euphrates and Tigris at Kurnah, where there is sufficient depth of water for the largest steamers, with a branch line by Shuster to the Persian Gulf; or to Bussorah, thirty-seven miles nearer the head of the Persian Gulf than Kurnah, where an extensive trade is already established, and where there is ample accommodation for square-rigged ships of large tonnage.

The grand impediment to the improvement of the Sultan's dominions is the want of the means of intercommunication, and no line would promote more effectually their good government and prosperity than that which would lay open to the energy and capital of the West the expansive plains of the Tigris and the Euphrates.

To England, the possession of an alternate short route to India is of inestimable value, and more especially when the actual lineal distance will be reduced by more than a thousand miles, and where rich fields are offered to the genius of her statesmen, and the enterprise of her merchants, by giving back to commerce, through the civilizing influence of steam, "countries, the cradle of the human race, and the theatre of the most important events in the Jewish, Pagan, and early Christian histories."*

* Expedition to the Euphrates and Tigris, by General Chesney.

The traffic by the existing route of the Red Sea must always be confined to large and powerful steam vessels, being impeded by rocky islands, coral reefs and the nature of the prevailing winds, whereas in the Persian Gulf, there are no physical obstructions whatever to its free navigation by vessels of all classes.

"The substitution of land carriage for water carriage, or rather, the substitution of overland cuts for long sea circuits," is, as *The Times* stated in a leading article some time ago, "the one simple principle of the present undertaking."

The importance of the Euphrates as a second and more expeditious route to our Indian possessions is daily forcing itself upon the public mind, and as the whole of Northern India and Central Asia, from the banks of the Oxus to the gates of Delhi, will shortly have an outlet to the sea by the Scinde Railway from Hydrabad to Kurrachee, relieving commerce from the dangers and delays of the Delta of the Indus, such a route would seem to become imperative.

"The sea stages of the present route to India," according to *The Times*, in the leading article before referred to, "exclusive of the trip across the Channel, are two: one from Marseilles or Trieste to Alexandria; and the other from Suez to (Kurrachee) Bombay, or Calcutta. These stages constitute by far the longest part of the journey, being 5,075 miles, performed by steamers; from which an average speed of some ten miles an hour is all that can be expected. The longer again of these two stages is that from Suez to Hindostan, as it includes a circuit round two sides of the triangular territory of Arabia. The first object, therefore, is to get rid of the detour by Aden; and this is to be done by carrying the passengers to the mouths of the Orontes, instead of the mouths of the Nile, and forwarding them across the Turkish territory to Bussorah, at the head of the

Persian Gulf. The railroad required for this purpose would run along the Euphrates Valley, and its length would not exceed 900 miles; whereas, its completion would reduce the distance from London to Calcutta by more than *one-half*, —by twenty days in fact out of thirty-nine! This project, it is conceived, could be accomplished in five years' time; and the route would then lie through Ostend, Trieste, by the Mediterranean Sea, to Orontes, thence to Bussorah, and by the Persian Gulf to Bombay (or rather to Kurrachee) where it would meet the Indian railroads now actually commenced, and by that time completed to Calcutta."

The advantages of the port of Seleucia were placed before Government by Captain, now Major-General Chesney, in 1832, (see pp. 63 and 64 of Euphrates Reports), and were subsequently advocated by that competent authority, Captain Allen, R.N. According to the latter officer, it is capable of being made one of the finest harbours in the world. Both these officers considered that from £20,000 to £30,000 would be sufficient to clear out the greater part of the ancient basin, and repair the massive works of the Romans, many portions of which require merely to be relieved from the mud deposited upon them. The importance of Seleucia will be apparent, when it is borne in mind, that there is no other port for commerce along the whole coast of Syria better than the open roadstead of Beyrout, or the pestilential harbour of Alexandretta. Seleucia is not only capable of being made a most efficient port, but by a small additional outlay, the existing great Mole might be extended so as to form a harbour of refuge.

By the existing road, Antioch is eighteen miles from Seleucia, and stands on the Orontes, the valley of which is throughout fertile and populous.

Aleppo is forty-two miles from Antioch, contains a population of about 90,000, is one of the most opulent and best

built cities in Syria, and the chief emporium for the trade of the country.

Ja'ber Castle, thirty-miles* distant from Aleppo, is on the Euphrates, which "gives a water communication with Syria, Asia Minor, and Asia Major, (their central parts,) also the South of Persia and Kurdistan."

"The Pachalic of Bagdad produces (and the greater part along the Euphrates,) wheat, barley, Indian corn, rice, millet, honey, dates in great quantity, and other fruits, wine, (from Kerkook and the banks of the Tigris,) cotton, some silk, tobacco, gall-nuts, and wool in great quantity, from the different Arab tribes, each of which has extensive flocks; also ambergris, sal ammoniac, leather, buffalo hides, oil of naphtha, bitumen, salt-petre, salt, borax, and glass, made at Bagdad; where are manufactured coarse coloured cottons, and fine handkerchiefs of silk and cotton for the Arabs.

"Bagdad was the centre of a considerable caravan commerce previous to the late disturbances, when it sent annually even as far as Erzeroum, 2,000 mule loads of pearls, silk, cotton, stuffs, shawls, coffee, gall-nuts, indigo, &c. and still more to Mosul, Diarbekir, Orfa, &c., and to Aleppo even at this moment, from 3 to 6,000 animals yearly, but 80 years ago, this number was said to be 50,000.

"Bagdad, from its matchless situation, would, with the slightest fostering care, become a grand centre of English, Arab, Persian and Eastern commerce; and nothing is wanting to distribute it widely, and increase it greatly but the establishment of steam."

"The imports to Bagdad from the Persian Gulf; pearls and fish.

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* The distances have been underrated. According to Sir John Macneill, by railway, the distance from Seleucia to Aleppo, is estimated at 118 miles.

" FROM PERSIA; Silk, woollens (coarse), saffron, sulphur, nitre, dried fruits, shawls of Cashmere, Kerman and Yezd; stuffs, cotton, gum-rahabat, fur-skins, tobacco and pipe sticks.

" FROM INDIA: Muslins, porcelain, indigo from Bengal, Guzerat, and Lahore; cottons, pepper, spices, cinnamon, nutmegs, Java and other sugars; musk, cardamoms, cotton and silk from the coast of Coromandel, aloes, camphor, &c.

" FROM TURKEY: Soap, cotton, linen, silks, embroidered stuffs, opium and copper, about 450 tons annually.

" FROM ARABIA: Incense, myrrh, galbanum, resins, gums and other precious drugs, also Mocha coffee, in quantity across the Peninsula, to go on to Constantinople and elsewhere.

" FROM EUROPE, EGYPT, &c.: (A part across the Desert from Damascus, but chiefly by way of Aleppo.) Bagdad receives cotton twist, grey cloths, and prints, grey-calicos, long-cloths, Greek-stripes, power-loom sheeting, jaconets, cotton handkerchiefs, (all English,) fine French or German cloths; cutlery, lead, tin, and St. Domingo coffee, also indigo, and cochineal, velvets, satins, taffeta, mercury and drugs.

" The chief outlets from Bagdad as a depot are to Constantinople:—Cashmere shawls, aloes, ambergris, musk, pearls, coffee, tobacco, spices, pipe sticks, and Indian muslins.

" TO SYRIA AND ANATOLIA: Are forwarded silk, tobacco, shawls, gall-nuts, coffee, stuffs, and drugs.

" TO PERSIA: Diamonds, rubies, emeralds, pearls, European stuffs, brought over the desert from Aleppo and Damascus: also Aleppo cloths, coral, paper, jewellery, cochineal and indigo.

" TO ARABIA AND INDIA: Silver, gold, copper, dates, horses, and oil of naphtha for painting.

" Thus it appears that imports continue to a considerable

extent notwithstanding all the difficulties and distance by which they are transported with caravans, and as there are pretty ample returns, it is evident that if ever the noble stream should be used instead of a caravan transport, there will be an increase and consumption proportionate to the comparative cheapness of the supplies, and the great facilities offered for placing depots, by water, at every convenient spot: this done, a few years will most likely see the Arab's wants increased to something like those of other people; and in making larger purchases, they will discover how to reimburse the expense, by cultivated cotton, grain, wool, &c., more extensively than they now do."

"It is worthy of the consideration of government, whether the proposed attempt should not be made, not only with a view to Mesopotamia chiefly, but the trade of Persia, now carried from Bushire to Erzeroum, more than 2,000 miles; whereas by attending to Erzeroum as one great centre, dependent on Trebizond and the outlets of the Euphrates and Karoon, we shall increase it prodigiously: and command the profits, which if neglected will flow into the coffers at Tiflis; where they are building extensive manufactories expressly to force goods into Persia, and attract its trade towards Russia."

"With this power and her persevering endeavours to grasp at commerce, we can also compete, as regards Persia, by another line, viz., that of the Indus."*

The official returns of the existing commerce to Mesopotamia, demonstrate that there is a promising field for commercial enterprise.†

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* Report of Captain Chesney in 1832, addressed to Sir Strafford Canning, G.C.B., Ambassador at Constantinople.

† See pp. 672—686, Vol. II. of the Expedition to the Euphrates and Tigris, by General Chesney; and recent Returns published by the Board of Trade.

In the statistics of the ancient and modern commerce of these countries, contained in the volume of General Chesney's work, on the Euphrates Expedition, will be found ample materials for the satisfaction of our merchants, as to a certain rapid and extensive increase of their operations, and more especially the Consular Returns, recently published by the Board of Trade.

The trade of Turkey-in-Europe, Asia Minor, Mesopotamia, and all along the proposed line to Bussorah, is of great importance, and only requires a ready means of transit for its rapid development. The success of the English and Austrian Steam Companies on the line between Constantinople, Smyrna, and the coast of Syria and Egypt, is a strong proof that the resources of these countries merely require an outlet. The Mahommedans are now quite alive to the importance of rapid locomotion—be it by railway or steamers. The tedious mode of transit by caravan is nearly at an end, whenever a quick mode of transport is available.

The countries to be traversed by the railway are rich in minerals, but have as yet been only partially explored with a view to their development.

This enterprise possesses in the opinion of those personally acquainted with the country and its resources all the elements of a highly remunerative character.

1st.—From the country presenting great facilities for the construction of a railway, being a succession of extensive plains traversed by low hills, between Antioch and Aleppo, and from Aleppo to Ja'ber Castle, a distance of thirty-nine miles, a perfect level.

2nd.—From the neighbouring mines of Marash having supplied iron of excellent quality to the Euphrates expedition. From an inexhaustible supply of timber of the finest quality for building purposes, sleepers, &c., being obtainable from the forests near the old Port (Seleucia) and Scanderoon, and from there being also large quarries of stone on

different parts of the line, with an abundant supply of bitumen and timber for fuel.

3rd.—From the first section of the line being of moderate length, and complete in itself, having a port on the Mediterranean at one end, and a terminus on the Euphrates at the other.

4th.—From the line from Seleucia to Ja'ber Castle, forming of necessity the most important portion of any system of improved transit, which shall follow the course of the valleys of the Euphrates and Tigris.

5th.—From the country below Ja'ber Castle to the head of the Persian Gulf affording every facility for the extension of the railway.

6th.—From the clearly proved statistical returns of the former trade and commerce of the country, its vast natural resources and manufactures, and the extensive transit trade which was formerly carried on between China, India, Persia, Armenia and Arabia with Europe, and especially with Great Britain, which has been greatly diminished by political causes, but which would speedily be revived, and from the conviction that the commerce of Great Britain with Central Asia, China, &c., instead of seeking, as at present, a costly and circuitous route by the Volga and the Caspian, would return to its natural, its more direct, and its most ancient channel.

From the obvious political and commercial importance of this, the most direct route to our Indian possessions, the Directors have reason to believe that they will receive from Her Majesty's Government, and the Honourable East India Company that countenance and co-operation, which is essential to the carrying out, with success, a means of communication which would reduce the time occupied in the journey by nearly one-half between this country and its empire in the East.

From W. P. Andrew, Esq., to His Excellency, Viscount Stratford de Redcliffe, G.C.B.

Gresham House, Old Broad Street,
London, 28th Feb. 1856.

My Lord,

Having for many years turned my attention to improving the means of transit in eastern countries, especially with the view to promote the political and commercial relations of England with her Indian possessions, and as the proposition I have now the honour to submit for opening a communication between the Mediterranean and Persian Gulf by that ancient channel of commerce, the Valley of the Euphrates, has, I have reason to believe, met in some degree with your approval, I am now requested by the gentlemen with whom I have the honour to be associated, respectfully to submit for your Excellency's consideration the documents noted in the margin having reference thereto.

1.—Prospectus of the Company of the Euphrates Route to India.

2.—Extension of powers and privileges conferred in the Firman granted by the Sublime Porte in 1834.

3.—Prospectus of the Scinde Railway.

4.—Prospectus of the Pernambuco Railway.

5.—Letter from John Kennedy, Esq., of Aleppo to W. P. Andrew, Esq.

2. The documents Nos. 1 and 2 have been carefully revised by those well known authorities, General Chesney and Captain Lynch, C.B., I.N., and others, and are approved of by Lord Glenelg and Sir Henry Rawlinson, the last-mentioned gentleman promising to join the direction so soon as his resignation of Consul-General in Turkish Arabia has been accepted, affording me in the meantime the advantage of his advice and co-operation.

3. I am now acting in concert with the Indian authorities in connecting by means of a railway the Arabian Sea with the Indus above the Delta, and shortly expect to continue the transit by means of steamers of improved construction on the Indus, aided by railways where the navigation becomes defective to Lahore and Amritser.

4. In this way a comprehensive system of steam transit is

being gradually introduced into the long neglected but magnificent valley of the Indus, and the proposition for connecting the Mediterranean Sea with the Euphrates and Persian Gulf resembles in some respects what is being carried out upon the Indus.

5. The prospectus marked No. 1 has been printed solely with the view to facilitate perusal. It describes the proposition for connecting the Mediterranean and Persian Gulf as approved of by the eminent and scientific gentlemen who surveyed the country, and are practically acquainted with its people and resources, and contains the names of those gentlemen who have honoured me by their confidence and co-operation.

6. The memorandum marked No. 2, proposing extension of Firman, contains an outline of the terms and conditions which we think would be necessary to raise the requisite capital.

7. The terms and conditions are very similar to those granted by the East India Company, to Indian railways, and by Austria, the Brazils, and other states to similar undertakings.

8. The papers marked Nos. 3 and 4 are prospectuses founded on such arrangement with the East India Company, and with the Brazils, and are enclosed for your Excellency's perusal.

9. For obvious reasons it appears desirable that the management of the Euphrates Valley route should be in the hands of Englishmen, yet from the vast political and commercial results which would flow from the opening of this route all civilized nations must feel an interest in its success, and every opportunity will be afforded to the allies of Turkey and England to co-operate in the enterprise, by raising a portion of the capital should they desire to do so.

10. Your Excellency is doubtless aware that a proposition for the introduction of improved means of communication by the Euphrates Valley route was referred to a commission, com-

posed of several of the Ministers of State and other dignitaries of the Sublime Porte in 1852, and that there is reason to believe that every member of that commission was in favour of the project, although from political and other causes the commission was dissolved before they had completed their official report.

11. The government authorities in Scinde and on the western side of India are most anxious for the early accomplishment of the project under reference.

12. I am aware that your Excellency has for many years taken a warm interest in a design calculated to benefit in no ordinary degree the Sultan's dominions, comprising some of the most interesting countries in the world, and opening thereby new outlets for the manufactures of Great Britain, facilitating at the same time her communication with her Indian Empire.

I confide, therefore, the proposition contained in the accompanying papers to your Excellency's enlightened consideration, and earnestly solicit your countenance and co-operation, should it be so fortunate as to meet with your approval, so far as is consistent with your Excellency's distinguished official position.

I have the honour to be, &c.

(Signed) W. P. ANDREW.

Chairman of the Board of Directors.

His Excellency, Lord Viscount
STRATFORD DE REDCLIFFE, G.C.B.,
&c., &c., &c.

P.S. Since the preceding letter was written an interesting communication has been received by me from Mr. Kennedy of Aleppo regarding the existing state of the trade of Syria, copy of which is enclosed for your Excellency's information.

I have the honour to be, &c.,

(Signed) W. P. ANDREW.

London, 6th March, 1856.

From Major General CHESNEY, R.A., &c. &c., to the Right Honourable The EARL OF CLARENDON, K.G.

Ballyardle by Newry,
Ireland, 5th March, 1856.

MY LORD,

With reference to several communications from the Foreign Office, more particularly a letter from Mr. Hammond, dated 30th December, 1854, stating "that her Majesty's Government are not prepared to entertain the project of Messrs. Spartali and Lascaradi for extending the trade of this country through Syria to Persia and India, but if any parties with whom you may have been in communication, should submit through Lord Clarendon to her Majesty's Government a practical proposal for establishing a mail communication with Bombay, *via* Trieste and Syria, and the river Euphrates, in the mode pointed out in your letter of the 30th ult., it will be duly taken into consideration."

I have now the honour of submitting to your Lordship the prospectus of a company which is being formed for this purpose, together with an explanatory letter, and outline of the concessions.

Letter to Lord Stratford de Redcliffe with enclosures dated 28th Feb. 1856.

1.—Prospectus of the Company of the Euphrates Valley route to India.

2.—Extension of powers and privileges conferred in the firman granted by the Sublime Porte in 1834.

3.—Prospectus of the Scinde Railway.

4.—Prospectus of the Pernambuco Railway.

5.—Letter from Mr. Kennedy of Aleppo to W. P Andrew, Esq. dated 12th Feb. 1856.

Since the commencement of a similar undertaking along the banks of the Indus, it has been evident that striking advantages must result from an extension of this undertaking, so as to approach nearer to the shores of Great Britain, by including the line through Arabia, and Mr. Andrew, the Chairman of the Company, who is well known by his successful exertions in the East, is the chief promoter of the great enterprise, which seems to deserve, and it is hoped will receive, your Lordship's energetic support.

The basis of the plan is the construction of a railway across Northern Syria to the Upper Euphrates, and for the present the navigation of this river from thence to the Persian Gulf. Eventually, the railway is to be carried the whole

way to the shores of the latter, and this when completed, as it is hoped it will be in about five years, will be the means of conveying mails and passengers between England and India in thirteen days and a half.

In countries where the present is almost invariably sacrificed, and every kind of exertion is utterly opposed to the habits and desires of the people, an undertaking of this kind must experience extraordinary, although it is to be hoped not by any means insuperable, difficulties. My experience in eastern countries gives me the firm belief, that these can and will be overcome, and that if the attempt to do so is made with the usual energy of our countrymen, and with the cordial support of Government, a second route to India will be successfully opened, and this with the accessory of a greatly extended commerce.

It is quite unnecessary for me to trespass upon your Lordship's time, by going at any length into a question already familiar to your mind, but I may briefly observe that the line through Arabia differs essentially from that which traverses the mountainous region between Trebizond and Erzeroum, or even the more practicable caravan route onward into Persia.

A letter of the 12th ult. from Mr. Kennedy, of Aleppo, shews that the imports by way of Alexandretta for 1855, amounted in round numbers to one and a quarter million sterling, and the exports from thence for the same period, to one million sterling, more than one-third of both these amounts being in British bottoms. This, of itself, is very encouraging to an undertaking like the present, but it becomes still more so if reference be made to the fact stated by Mr. Werry in 1837 and 1838, that the presence of the Euphrates expedition, by causing more confidence, greatly increased commerce for the time being.

Looking therefore to this fact, as regards the past as well

as the existing trade, under numerous disadvantages, there can scarcely be a doubt that increased facilities (were they only the construction of ordinary roads) would make Aleppo a great emporium, and being largely and cheaply supplied it will become the centre of various lines of eastern trade. By one of these goods will pass into Asia Minor, through Dyarbekr. A second will be from Bagdad into Kurdistan and Azerbaijan; a third will pass along the river Karun and enter Southern Persia; a fourth will reach the Indus and Central Asia.

In addition to these unquestionable advantages to Great Britain, still greater must still accrue to Turkey, by the improvement of her people and the development of her latent resources, which in this case will assuredly take place to an extent that must greatly raise the Turkish people in the scale of nations.

But more extensive commerce, and greater facilities of mail and passenger communication between England and India are but a part of the benefits which your Lordship may expect from the proposed undertaking.

I presume that the use of electric wires must form a part even of a preliminary opening of the line in question, and I think it will be easy to shew that the 660 miles across Arabia offer great facilities for this kind of communication, which when perfected under proper arrangements with the Arabs, will give us a communication to and from India in the short space of eighteen or twenty hours.

I have the honour to be, &c.,

(Signed) F. R. Chesney.

Major General.

The Right Honourable
The Earl of Clarendon, K.G., & G.C.B.,
Secretary of State, &c., &c., &c.

From W. P. Andrew, Esq., and Major General Chesney to His Excellency M. Musurus.

Son Excellence M. Musurus,
Ambassadeur de la Sublime Porte.

Votre Excellence,

Nous avons l'honneur de subir pour l'information de votre Excellence, et d'apres le désir des Messieurs avec lesquels nous sommes associés, les documents ci-inclus, et notés en marge, ayant rapport a la formation d'une Compagnie, pour établir une communication entre la Mediterrannée et le Golfe Persique, *via* l'Oronte et l'Euphrate, par un chemin de fer, de Seleucie et le Chateau de Jaber sur l'Euphrate, et de là par bateaux-à-vapeur, sur cette rivière au Golfe Persique.

A—Lettre a Lord Stratford de Redcliffe, avec ses incluses, vizt. 1.—Prospectus de la Compagnie de la route dans l'Inde, par la Vallée de l'Euphrate. 2.—Extension des pouvoirs et des privileges conferés dans le Firman, octroyé par la Sublime Porte, en 1834. 3.—Prospectus du chemin de fer de Scinde. 4.—Prospectus du chemin de fer de Pernambuco. 5.—Lettre de M. Kennedy à Aleppo, a M. W. P. Andrew. 6.—Lettre a Lord Clarendon.

Duplicats des ces papiers ont etés transmis au Gouvernement Anglais et a Lord Stratford de Redcliffe à Constantinople.

Votre Excellence connait bien que la practicabilité de la route proposée, a été décider depuis long temps, par l'expedition commandé par le Général Chesney, et que des recherches scientifiques faites depuis ont confirmér la verité du jugement passé par le Général Chesney, et les officiers distingués sous ses ordres.

Votre Excellence connait sans doute les travaux assideux et habiles de feu le Dr. James Bowen Thompson pour produire l'accomplissement des grands buts contemplés par l'avancement du commerce dans les plaines tres faciles a fertiliser de l'Euphrate et du Tigre, et obtenir pour la proposition qui vous est referée dans les papiers qui accompagnent, l'approbation favorable du Gouvernement Anglais, et de la Sublime Porte, ainsi qu'il y'a raison de le croire, celle de sa Majesté Impériale le Sultan.

En addressant votre Excellence sur une entreprise cal-

culée a dévélopper les resources et affermir le pouvoir du Sultan dans ses dominions étendues, nous vous confions dans les vues eclairés de votre Excellence, et sentons qu'aucun argument n'est necessaire pour recommander cette entreprise a votre attention, et nous esperons que votre Excellence prendra une occasion de parler en faveur de ce projet en question, pour la prochaine consideration de la Sublime Porte.

En attendant nous recevrons avec remerciements aucun avis ou co-opération, que votre Excellence daignera bien nous donner.

Nous regrettons que votre absence a empêcher que nous puissions solliciter l'honneur d'un entrevue, pour pouvoir placer personellement dans les mains de votre Excellence, les documents accompagnants.

Nous avons l'honneur de supplier
Votre Excellence avec profond respect,
Que nous avons l'honneur d'etre,
Votre tres humbles et tres obeissants serviteurs,

Ingénieur en Chef
pour les Consultes.
(Signé) F. R. Chesney,
Major-Général,

President
du Conseil des Directeurs.
(Signé) W. P. Andrew.

Gresham House, Old Broad Street,
London, 12*th March*, 1856.

From W. P. ANDREW, Esq., Chairman of the Euphrates Valley Railway Company, to the Chairman, Deputy Chairman and Court of Directors of the Honourable East India Company.

Gresham House, Old Broad Street,
17th March, 1856.

GENTLEMEN,

I have have the honour at the request of General Chesney, and the other gentlemen associated with that distinguished and scientific officer, and myself, to transmit for the information of the Honourable Court the enclosed documents noted in the margin, relating to a proposal for establishing a communication between the Mediterranean sea and the Persian Gulf, *via* the Euphrates, and with the view that the documents may be forwarded to H. M. Government, should the proposition meet with the approval and concurrence of the Court.

A.—Letter from Gen. Chesney to W. P. Andrew, Esq., dated 12th March, 1856.

B.—Letter from Gen. Chesney to the Earl of Clarendon, dated 5th March, 1856.

C.—Letter to Lord Stratford de Redcliffe from W. P. Andrew, Esq., dated 28th Feb., 1856, with enclosures, viz.:

1.—Prospectus of the Company of the Euphrates Valley route to India.

2.—Extension of powers and privileges conferred in the Firman granted by the Sublime Porte in 1834.

3.—Prospectus of Scinde Railway.

4.—Prospectus of Pernambuco Railway.

5.—Letter from John Kennedy, Esq., of Aleppo to W. P. Andrew, Esq., dated 12th Feb., 1856.

2. The importance to this country, to Turkey, and to India, of establishing a mail and passenger line of communication by the Valley of the Euphrates, has long been apparent to the Honourable Court.

3. By this route the actual distance between England and India, will be shortened by from 1,000 to 1,500 miles; and when the first comparatively short section of the line is opened, the time occupied would be reduced by one third, and when the railway is completed from Seleucia to Bussorah, a distance of 660 miles, Kurrachee or Bombay would be reached in less than half the time now occupied.

4. It is proposed to secure a concession of the land, and a guarantee on the capital necessary from the Sublime Porte, and other privileges (see enclosure No. 2,) subject to the sanction and approval of H. M. Government for the construction of a railway, 80 miles in length, from Seleucia, in the Bay of Antioch to Jaber Castle on the Euphrates, below which point the navigation of the river is permanently open;

the railway gradually to be carried down the Valley of the Euphrates to Bussorah, at the head of the Persian Gulf; but in the first instance the transit would be effected by steamers of light draught between Ja'ber Castle and Bussorah.

D.—Letter to M. Musurus from Gen. Chesney and W. P. Andrew, Esq., dated 12th March, 1856.

5. A reference to General Chesney's letter to the Earl of Clarendon (see enclosure B,) will show that in addition to postal and passenger traffic, he desires to establish telegraphic communication by the Euphrates Valley route.

6. It may be satisfactory to state, that General Chesney, and the officers who served under him in the Euphrates expedition, and others who have recently returned from Turkish Arabia and Syria, feel assured that there will be no difficulty in arranging with the Arabs, and other natives of those countries for the protection of the railway, the telegraph, or any other works that may be constructed.

7. Should it be decided upon to carry the telegraphic wire along the Valley of the Euphrates and the Persian Gulf, to meet at Kurrachee, the Indian system of electric communication, already, or about to be established, the Mediterranean and Indian Telegraph Company, who have secured the monoply of this kind of communication through Sardinia and France and the Submarine Telegraph Company, will be prepared, there is reason to believe, to co-operate, so as to complete the communication between India and this country.

8. This route would restore commerce between the East and the West, to its most direct and most ancient channel, while it would give back to the husbandman the once highly productive, but long neglected plains of the Euphrates and Tigris, and open up new outlets for the products of British industry, at the same time developing the resources of, while consolidating the power of the Sultan in his Asiatic dominions.

9. The powerful effect that this measure would have in promoting civilization and enlightenment in, probably, the most ancient and interesting countries in the world, and the

additional ascendancy in the East, that would be secured thereby to this country, will have their due weight with the Hon. Court.

10. The proposition under reference, being calculated to have a powerful influence on the future progress, and well being of the magnificent empire confided to the charge of the Honourable Court, especially, and more immediately those recently acquired and most important territories watered by the Indus and its tributaries, it is hoped that it may be their pleasure to extend such an amount of countenance and support as they may feel justified in doing in transmitting the papers to H. M. Government.

I have honour to be, &c.,

(Signed) W. P. ANDREW,

Chairman of the Board of Directors.

To the CHAIRMAN, DEPUTY CHAIRMAN,
and COURT of DIRECTORS of
The Hon. East India Company.

From the Right Honourable THE EARL OF SHELBURNE to W. P. ANDREW, Esq.

Foreign Office, August 19*th*, 1856.

SIR,

I am directed by the Earl of Clarendon to state to you, that with a view to enable his Lordship to furnish Viscount Stratford de Redcliffe with instructions as to the support to be afforded to Major General Chesney and the Company which he represents, Lord Clarendon would be glad to receive from you precise statements and particulars as to the proposed Euphrates Railway, and as to the assistance which can be afforded by her Majesty's Ambassador.

I am, Sir,

Your most obedient humble Servant,

(Signed) SHELBURNE.

W. P. ANDREW, Esq.
26, *Montague Square.*

From W. P. ANDREW, Esq., to the Right Honourable THE EARL OF SHELBURNE.

Euphrates Valley Railway Company Limited
Gresham House, Old Broad Street,
26th August, 1856.

MY LORD,

I have the honour to acknowledge the receipt of your letter of the 19th inst., requesting me to communicate for the information of the Earl of Clarendon, precise statements and particulars regarding the Euphrates Valley Railway Company, to enable his Lordship to give instructions to Viscount Stratford de Redcliffe to support Major General Chesney on his mission to Constantinople, as the representative of the Euphrates Valley Railway Company.

2. In reply I beg to state, that the objects contemplated by this Company are shortly as follows:

3. This Company is established to connect the Mediterranean and the Persian Gulf, by a Railway from the ancient port of Seleucia by Antioch and Aleppo, to Ja'ber Castle on the Euphrates, of eighty miles in length, and afterwards from thence by other towns to Bagdad, and on to the head of the Persian Gulf. Thence by steamers, communication will be established with all parts of India.

4. The effect of the proposed contract to be entered into between the Sublime Porte, and this Company will be, that the Ottoman Government guarantee a minimum dividend on the Capital required at 6 per cent. per annum for ninety-nine years, with power to raise capital for steamers at a rate to be hereafter determined.

5. The Ottoman Government grant a lease of the land necessary for the railway and works for ninety-nine years free of charge.

6. On the opening of the line, all nett profits exceeding the rate of dividend guaranteed are to go to the Ottoman Government, in liquidation of the dividends they have advanced. When this advance is repaid, the entire surplus goes to the Shareholders.

7. At the expiration of ninety-nine years, the land with the railway and works pertaining thereto, will become the property of the Ottoman Government, who will at the same time purchase the rolling stock at a valuation to be settled by arbitration.

8. The Ottoman Government guarantee the Company against all competition from works of a similar character—and grant the right of land, woods, forests and quarries, the property of the State at a certain distance at each side of the line.

9. The preliminaries for a concession on the above basis were mutually agreed to by His Highness Aali Pasha, Grand Vizier when in this country, and M. Musurus with General Chesney and myself; His Highness referring me as the Chairman of the Company to M. Musurus for the settlement of the details, and requesting me on his departure from England to send an Agent to represent this Company at Constantinople, having full power to give effect to the preliminary agreement, so that the Firman might be issued giving the formal and official sanction of the Sublime Porte to the concession and guarantee.

10. The Directors of this Company have selected General Chesney, their consulting Engineer, for this mission, feeling that from his intimate acquaintance with Turkey and its people, and from his high and honourable character, he is peculiarly qualified to conclude arrangements begun and carried thus far under the most promising auspices.

11. The Major General will be accompanied and aided in his mission to Constantinople, and the subsequent survey

in Syria, by the celebrated Engineer, Sir John Macneill, and takes his departure on the 1st proximo.

12. On the 17th of March last, by desire of the Chairman of the Honourable East India Company, I forwarded to Lord Clarendon, through the Honourable Court and the Board of Control, a letter addressed to Lord Stratford de Redcliffe, with enclosures containing full particulars connected with the Euphrates route to India, and begging his Lordship to exert on behalf of the effort that was being made to establish a communication between this country and India, *via* the Euphrates, his great and just influence with the Turkish Government, to facilitate the negotiations for the Firman, so far as was consistent with his Excellency's distinguished official position.

13. I have reason to believe, that Lord Stratford de Redcliffe has long regarded with much interest, the establishment by Englishmen of the proposed direct route to India, so calculated to promote the prosperity, safety, and consolidation of the Sultan's Asiatic dominions, being at the same time of inestimable importance to the policy and power of this country.

14. I have therefore only in conclusion, to request that Lord Clarendon would be good enough to state to Lord Stratford, the same approval and concurrence in the objects contemplated by this Company, he was pleased to express verbally when I was honoured with an interview, and suggest to the Ambassador, the recognition by his Excellency of the mission of General Chesney, as one worthy of his countenance and furtherance.

I have the honour to be, &c.,
(Signed) W. P. Andrew,
Chairman of the Euphrates Valley Railway Company.

The Right Honourable
The Earl of Shelburne,
&c. &c. &c.

From W. P. ANDREW, Esq., to Major General CHESNEY, R.A., &c., Commissioner for the Euphrates Valley Railway Company, to the SUBLIME PORTE.

Euphrates Valley Railway Company Limited,
Gresham House, Old Broad Street,
London, 28th August, 1856.

SIR,

As you have been appointed by a Resolution of the Board of this Company to proceed as Commissioner to Constantinople, in company with Sir John Macneill, the engineer in chief of the Euphrates Valley Railway Company, to represent the interests of that Company at the Sublime Porte, the Board of Directors have requested me to express their wish that it be understood that you proceed to the Turkish capital by whatever route you may deem most advisable, and that when there, you will use your utmost diligence in procuring the firman and concession, as also the guarantee of 6 per cent. upon the capital of the Company, according to the details given in the Prospectus, and held out by His Highness Aali Pacha, and His Excellency M. Musurus, the Turkish ambassador, and in conformity with the formal document appointing you to act as Commissioner on this behalf.

2. The Board of Directors feel assured from communications that have been held with the Earl of Clarendon, Her Majesty's Minister for Foreign Affairs, that you will receive every assistance in these negotiations from Viscount Stratford de Redcliffe, Her Majesty's ambassador at the Sublime Porte.

3. It is the wish of the Board that you should keep his Excellency informed, by demi-official communications, of everthing of importance connected with your mission at Constantinople, and during the subsequent survey in Syria.

But as His Highness Aali Pacha expressed his distinct wishes, when he was in this country, both to the Chairman of the Board and to the Turkish Ambassador, that the negotiations should be carried out simply between the Company and himself, the Grand Vizier, as having reference to matters of a public and non-political character, the Board of Directors deem it to be advisable to attend to such expressed wishes, so far that the interference of the British Ambassador need not be had recourse to, except in case of difficulties arising in carrying out the proposed negotiations.

4. With reference to that portion of the formal agreement to be entered into with the Porte, as to the guarantee of the Turkish government of 6 per cent. dividend on the capital required for the railway, and of a certain amount of dividend to be hereafter arranged, on the capital for steamers, you will use every effort to procure a charge over the revenues of Alexandretta, or the Pashalic of Aleppo or Bagdad, for the due payment of the dividend guaranteed by the Porte, in the same manner as the payment of the interest on the six per cent. Turkish loan is assured by a lien on the tribute of Egypt.

5. The preliminaries and basis of concession, and guarantee having been fully arranged with His Highness Aali Pasha, the Grand Vizier, should any delay occur in obtaining the filling up of the necessary legal forms, you will be pleased to make over the carrying out of the details to Mr. Francis Horsley Robinson, one of the directors of this Company, and Mr. William Ainsworth, who are about to proceed on a mission to Constantinople, to represent the interests of the European and Indian Junction Telegraph Company, at the Sublime Porte: and you will then proceed in company with Sir John Macneill to join the staff of engineers at Seleucia, where you will make the necessary arrangements for determining a temporary suitable place, for the disembarkment of

materials, soon after which, to facilitate your arrangements, you will communicate with Mr. Kennedy and M. Picciotto, at Aleppo, who have been appointed to circulate the prospectus, and receive applications for shares. The former gentleman is ready to afford much information and assistance.

6. My colleagues, and myself, are well aware of the difficulties in the way of establishing in an efficient manner the great work in which we have embarked, but no great work was ever achieved without difficulty, and they never thought, and do not think now, that an undertaking which affects in the most immediate and powerful manner the interests, the relations, and the hopes of so many nations, can be an exception to the general rule.

7. No one knows better than yourself, from your extensive and varied experience in the countries proposed to be laid open to civilization and commerce, that the route proposed to be traversed from Seleucia on the Mediterranean to Bussorah, at the head of the Persian Gulf, is so singularly free from physical obstructions throughout the length of the entire valley, that it seems designed by Providence, as the natural, as it is the most direct, highway for the intercommunication of the nations of the East with those of the West.

8. The difficulties referred to are moral and political, arising from the unsettled state of those countries, and the habits of the nomade tribes, but the testimony of yourself and the officers of the expedition under your command, as well as that of Sir Henry Rawlinson, Mr. Layard, Mr. Ainsworth, Captain C. D. Campbell, I. N., and other recent travellers, leave no doubt these difficulties only require to be surmounted, a conciliatory conduct, and disturbing as little as possible existing rights of pasture, and the usages of the country, and seeing that compensation was made wherever they were infringed; by, in short, identifying the Sheiks and their people with the

enterprise, so as to give them a material interest in its permanency and security.

9. You are well aware that to accomplish the great object of a rapid communication with India, the construction of a safe harbour on the shores of the Mediterranean is indispensable, from which a line of railway may be carried to the upper Euphrates—Alexandretta would offer such a harbour, almost without expense, but it is believed that the Beilan Hills, unless it were possible to turn them by a coast line towards Seleucia and the Orontes, are almost impracticable for a railway, and that it will therefore be necessary to direct your attention in an especial manner to the ancient Port of Seleucia, which has been surveyed and favourably reported upon by yourself and Captain Allen, R.N.

10. It should not, however, be forgotten, that the Port of Alexandretta (which according to Sir John Franklin, Admiral Beaufort and others, would contain the whole navy of Great Britain,) would give the shortest line to Castle Ja'ber, if the engineering difficulties could by any means be overcome—and as the objection of its unhealthiness would be removed by placing the station on a salubrious spot seven miles from the shore, it seems desirable that it should undergo further examination, and that the selection of the harbour should be considered an open question until this has been done, since the journey to Syria is undertaken at a heavy expense, for the express and paramount objects of choosing the best place for a commercial port, and the best line for a railway communication from thence to the shores of the Persian Gulf. We already know that the Upper Euphrates may be reached with a railway from the Bay of Antioch, either by a line passing northward of Aleppo, or by another southward of that city. The former would be chiefly by the line of levels laid down during the Euphrates expedition: the other would follow the river Orontes for some distance, and afterwards

proceed by Berœa, (which is some miles south of Aleppo,) to Ja'ber Castle. It is pretty certain that neither of these routes would present any serious engineering difficulty; but what we do not know is the comparative expense and time involved in removing rocks near the Orontes in the one case, and the cuttings that may be necessary in the other. Fortunately, your local acquaintance with the country, and the extensive practical knowledge of Sir John Macneill, will afford the means of determining with certainty the relative advantages of the two lines.

11. There is apparently no opportunity of landing nearer to the Orontes than either at Beirout, some distance southward, or at Scanderoon, a little to the northward. The Austrian steamer touches at the latter port, and by previous arrangements about horses, you can go through the Beilan Pass, and thence to Suedia. After deciding by these means, not only the best position for the harbour, but what is scarcely of less moment, a suitable temporary landing-place, on which much depends, since the Bay of Antioch is an open anchorage—your attention will then be directed to the examination of the two routes in question.

12. You will then, assisted by the advice and counsel of Sir John Macneill, mark out the line of country to be definitively surveyed for the purpose of a railway between that place and the neighbourhood of Antioch, whether on the right or left bank of the Orontes.

13. You will afterwards proceed in the same manner to indicate the most advantageous line of route to be surveyed from Antioch, onward, so as to pass as close to Aleppo as the high ground will permit, and thence to Ja'ber Castle on the Euphrates.

14. In doing this you will be partially guided by the results obtained by the line of levels carried under your direction as Commander of the Euphrates Expedition, across

the plain of Umf, by Jindaries, and striking eastward to Beles and Ja'ber, by a line which will pass as near as possible to the northern side of Aleppo.

15. You will, however, more particularly direct your attention to the ordinary route by the valley of the rivulets of Herein and Amguli, and the district of Danah to the southern side of Aleppo, but at the same time your are not to lose sight of the fact, that in case any great engineering difficulties should occur in such direct line, that several openings present themselves in the range of hills which border the upper valley of the Orontes to the east, by which the Euphrates could be reached by a line south of Aleppo.

16. From Aleppo eastwards you will have to determine whether it will be most advisable to follow the route direct to the Euphrates at Balis, or Beles, and then keep along the valley of this river to Ja'ber Castle, or to cross the country in a direct line to the latter place, or rather to a spot on the Euphrates opposite to that castle. But it is presumed that all these points will have been determined by the journey as proposed; by one route, and returning the other. But anything further that yourself or Sir John Macneill may deem it advisable to do for the company, either further along the Valley of the Euphrates, or in the country intervening between that river and the Mediterranean, it will be desirable, that it shall be as far as possible accomplished, and the Board of Directors will fully appreciate any exertions and sacrifices you may make on behalf of the great and important objects which you are deputed, with the aid and assistance of Sir John Macneill, to carry out.

17. The Board approve of your desire to proceed to Syria, soon after opening negociations with the Porte, and presenting your credentials to Lord Stratford de Redcliffe, conceiving it to be of the utmost importance for the furtherance

of the pending negociations to have the preliminary surveys proceeded with and completed with as little delay as possible.

18. The Board therefore hope that there will be no necessity for your remaining at that city after the arrival of Mr. Robinson and Mr. Ainsworth, in the success of whose mission this Board takes a warm interest, and it is their particular wish that you afford these gentlemen every facility with the view to the attainment of the kindred objects contemplated by their mission and your own.

19. I am further to request, that although Sir John Macneill is not formally associated with you, in your mission to the Porte, that you will in all your proceedings avail yourself of the advice and experience of that distinguished and scientific gentleman.

20. The Ottoman Bank at Constantinople will honour your drafts for the necessary charges of the mission, and the engineering staff, and every effort will be made by this Board to promote the success of the important negociation with which you are intrusted.

21. You will be good enough to report your proceedings weekly for the information of the Board, and furnish at the same time an account of the expenditure for yourself and Sir John Macneill and the engineering staff, retaining in your possession, until your return, any vouchers that you may receive.

22. You will be good enough to communicate to Sir John Macneill the contents of this letter for his information and guidance.

I have the honour to be, Sir,
Your most obedient, humble Servant,
(Signed) W. P. ANDREW,
Chairman.

MAJOR-GENERAL CHESNEY, R.A., D.C.L., F.R.S., & F.R.G.S.,
&c., &c., &c.
Commissioner of the
Euphrates Valley Railway Company to the Sublime Porte.

From W. P. ANDREW, Esq., to Sir JOHN MACNEILL, LL.D., F.R.S., &c., Engineer-in-Chief Euphrates Valley Railway Company.

Euphrates Valley Railway Company, Limited.
Gresham House, Old Broad Street,
London, 28th August, 1856.

SIR,

As you are about to proceed to Syria as the Engineer-in-Chief of this Company, in concert with General Chesney and a competent staff of engineers, to make a preliminary survey of the country between the Mediterranean and the Euphrates, with the view to the selection of a port on the Mediterranean, from which the railway should commence, and the exact point on the Euphrates on which the line should debouche, as well as to determine the exact route to be followed by the railway through the intervening country, I have the honour to enclose for your information and guidance copy of a letter of instructions, addressed by me to General Chesney, in his capacity of Commissioner of this Board to Constantinople and Syria.

You will be good enough to consider General Chesney as the representative of this Board during his mission to Turkey, and make him the medium for any communication you may think proper to address to this Board.

I have the honour to be, Sir,
Your most obedient servant,
(Signed) W. P. ANDREW,
Chairman.

Sir JOHN MACNEILL, LL.D., F.R.S.,
&c., &c., &c.

From E. Hammond, Esq., to W. P. Andrew, Esq.

Foreign Office,
September 29th, 1856.

Sir,

I am directed by the Earl of Clarendon, to transmit to you, as Chairman of the Euphrates Valley Railway Company, copies of two letters from Major General Chesney, respecting certain assistance which he requests from Her Majesty's Government, in support of the undertaking. I am also to enclose a copy of a reply which Lord Clarendon has caused to be addressed to General Chesney.

I am at the same time to acquaint you that copies of your letter of the 26th of August, and of the instructions given by the Company to Major General Chesney, enclosed in your letter of the 3rd of September, have been sent to Viscount Stratford de Redcliffe, with instructions to use his best efforts to assist this important undertaking.

I am, &c.,
(Signed) E. Hammond.

W. P. Andrew, Esq.

From W. P. Andrew, Esq., to Ralph Osborne, Esq., M.P.

Euphrates Valley Railway Company Limited,
Gresham House, Old Broad Street,
London. 25*th November*, 1856.

Sir,

As the Chairman of the above Company, I have the honour to request that you will be good enough to express to the Right Honourable the Lords Commissioners of the Admiralty the best acknowledgments of this Board, for the great assistance rendered to Major General Chesney, the Commissioner of this Company, Sir John Macneill, and the Engineering Staff, on their recent mission to Syria, by Her Majesty's ship "Stromboli" having been placed at their disposal, during the prosecution of the survey in Syria of the first portion of the railway from the Mediterranean to the Persian Gulf.

2. The facilities thus afforded have contributed most materially to the successful prosecution of the objects contemplated by the mission of General Chesney and Sir John Macneill, and the sincere thanks of this Board are due to His Excellency Lord Lyons, Naval Commander-in-Chief in the Mediterranean, not only for his great courtesy to these gentlemen, but for the promptitude with which he detached the "Stromboli," in furtherance of the important objects contemplated by them.

3. Both General Chesney and Sir John Macneill speak in the strongest terms of the cordial reception experienced by them from Captain Burgess and the officers of the "Stromboli," and of their zealous and efficient assistance, wherever their services could be made available.

I have the honour to be, Sir,

Your most obedient humble Servant,

(Signed) W. P. Andrew,

Chairman of the Euphrates Valley Railway Company.

Ralph Osborne, Esq., M.P., &c.
Admiralty.

A French Opinion as to the Comparative Political and Commercial Importance of the Route by the Railway by the Euphrates and that by the Suez Canal.

Brief notice of the " Memoir" of M. Jules Falkowski, C. E.

The Indo-European Railway would have its point of departure from Suedia (ancient Seleucia Pieria), near the embouchure of the Orontes; it would ascend the valley of the river, passing Antioch, and after traversing a range of hills, called Halaka, by a tunnel of from four to five hundred metres (French yards) in length, it would direct itself by the plain of Aleppo and the valley of a little river called Abu Gal gal, as far as to the Euphrates, near Rajik, five leagues to the northwards of Balis. From Rajik the rail would follow the course of the Euphrates on the Mesopotamian side as far as to Felujah, whence, after having sent off a trunk to Bagdad, it would cross the river, and coursing along the actual dry bed of the ancient Pallacopas or Sjarri Zaade, it would reach Zobair. Turning thence to the north-east it would traverse a plain of little extent, and attain Bussorah, which, as it may be considered to be a maritime port, would constitute the extreme point of the railway.

The total length of such a line of railway would be 1,233 English miles, thus divided:

1st section from Seleucia to Rajik . . .	180 miles.
2nd section from Rajik to Hit, a point where the Euphrates begins to be navigable throughout the year	494 ,,
3rd section from Hit to Bussorah	559 ,,

The expenses of construction of the entire line, which could be traversed by an ordinary train in forty-two hours, would attain at a maximum 395 millions of francs, or in round numbers, 400 millions of francs (£16,000,000), a sum which could only be raised by a succession of contributions, spread

over a period of from ten to twelve years, the time necessary to carry out the works.

The advantages which so rapid a communication between the Mediterranean and the Indian Seas, would entail to the commerce of the world, and to the cause of civilization, are incalculable. We will notice them in a summary manner.

I.

The projected route would be the most direct from Europe to India, giving a gain of eight days upon that actually adopted for the English mail by Lower Egypt and the Red Sea, supposing the railway from Alexandria to Suez, now in course of construction to be actually completed.

Here is, in fact, the comparative table of distances, which is given after the surveys effected in 1836, of the course of the Euphrates by Colonel (now General) Chesney, and the English scientific commission placed under his direction.

	Miles	days	hours		Miles	days	hours
From Bombay to Suez by steamer .	2,936	17	0	From Bombay to Bussorah by steamer	1,587	8	0
From Suez to Alexandria by railroad	265	0	9	From Bussorah to Seleucia by rail .	1,233	0	42
From Alexandria to Malta by steamer	0	4	0	From Seleucia to Malta by steamer		4	0
Total . .	3,201	21	9	Total . .	2,820	13	18

It will be seen from these positive details, first, that whilst upwards of twenty-one days would always be necessary to effect the transit from Bombay to Malta by the Red Sea and Lower Egypt; it would only require fourteen at the most to pass from one of these points to the other by the Persian Gulf and the Euphrates Valley Railway; secondly, that the town of Antakiya, the ancient Antioch, situated in the neighbourhood of the Mediterranean, would be, after the construction of such a railway, at forty-two hours distance from the Persian Gulf, and ten days from Bombay; in a position which would most undoubtedly make it in a very short time the general mart of commerce between the different countries

situated in the basin of the Mediterranean and of the Black Sea on the one hand, and of all the rich countries bathed by the Indian Seas on the other, as it was in olden times, and as Aleppo was afterwards, when the commerce of India deviated into another line.

It is difficult to express beforehand in actual numbers the quantity of merchandise that will be transported by the projected line from Europe to India, and from India to Europe; but we have endeavoured, in our "Memoir," to indicate the minimum. We reproduce here substantially the general considerations which guided us, and the results at which we arrived.

The Indian Peninsula, the islands of the Indian and Chinese Seas actually transmit to Europe, upon an average, upwards of 700,000 tons of merchandise yearly, being the freights of more than 1,200 ships, and constituting a value of about 800 millions.

In exchange, Europe exports upon an average to these regions more than 500,000 tons of merchandise, freighting 900 ships and presenting a value, officially verified, of about 100 millions. England, Holland, and France are the three countries of Europe, that are almost solely engaged in this distant commerce; but if France only inports from these Asiatic territories that which is strictly necessary for its own consumption; England and Holland make the other countries of Europe participate indirectly in their imports; so that the numerieal expressions of that import as given above, indicates in reality the consumption made by all Europe of the productions of India, of Java, and of China.

A certain number of these products have become indispensable to the life of all civilized people; such are more especially coffee, pepper, sugar, tea, and indigo. At least a third of the total quantity of these articles are shipped from the harbours of the Atlantic and from the German Sea, to the

populous regions that border the Mediterranean and the Black Sea, and which comprising France among them, would have an incontestable advantage in receiving them directly by the Euphrates Valley Railway, and the Mediterranean port of Seleucia. We consider then, the transport of this third of the whole importations of Asia, in coffee, pepper, sugar, tea, and indigo, as presumably secured to our railway.

The other diverse commodities which the three great maritime nations derive from southern Asia, constitute a further mass of 386,000 tons, of which we only take a relatively very small portion to attribute its transit to the railway in question; such portion being equally destined to the special use of the countries situated in the basins of the Mediterranean and the Black Sea, and consisting of commodities which are the most liable to deterioration; as exotic resins, roots, and aromatic essences, spices, palm and other oils, oleaginous grains, articles of pharmacy, and chemical products.

We leave without our calculations the exportations which the countries neighbouring the Mediterranean, may make of their produce by the railway projected towards India, Java, and China, as also all the special commerce carried on by England and Holland with the same countries; that is to say, all that they draw thence for their own special use, and all that they furnish of their own manufacture. We shall only except the tea of China, of which we suppose the half to be exportable, and to be placed to the account of merchandise that will be transported by the Euphrates Valley Railway, for the very reason that its delicate leaves lose much of their aroma and of their savour by a long sea journey; and we are thus enabled to establish a minimum of transports which the maritime canal of Suez itself would not be able to take away from it.

The annexed table resumes our estimates in numbers based upon French, English, and Dutch official documents:—

Table of the general Importation of India, Java, and China into Europe.

	Mean of the actual Importation by the Cape of Good Hope.	Presumed Importation by the projected railway.	Proportion between the two.	Produce for every kilometre (1,060 French yards), according to the French tariff.	Produce for the whole length of the railway.
Coffee	86,933 tons	28,977 tons	3 : 1	at 8 c. the ton 2,318 francs	4,596,594 francs
Pepper	3,936 „	1,312 „	Id.	do. ... 104 „	206,232 „
Indigo	3,154 „	1,051 „	Id.	at 10 c. ... 105 „	208,215 „
Sugar	183,351 „	61,117 „	Id.	at 8 c. ... 4,889 „	9,694,887 „
Tea	27,767 „	13,888 „	2 : 1	at 10 c. ... 1,388 „	2,752,404 „
To France. Exotic resins, roots and aromatic essences. Spices, palm and other oils. Oleaginous grains. Articles of pharmacy. Chemical products . Total, 6,839 tons To other countries situated in the basins of the Mediterranean and the Black Sea. Same commodities . . . . . 10,000 tons Total . . 16,839 tons	386,839 „	16,839 „	23 : 1	at 10 c. ... 1,683 „	3,337,389 „
Total . .	691,980 tons	123,184 tons	5¼ : 1	10,487 francs	20,795,721 francs

The 123,000 tons to be exported by the Euphrates Valley Railway, according to this appreciation of the minimum, constitute as we see, less than one-fifth of the general and annual importation of southern Asia into Europe, and nearly a tenth of the total mass of merchandise exchanged between Europe and the same regions.

Nevertheless, this small portion taken from that which is actually freighted round Africa, would bring to the railway in round numbers upwards of 10,000 francs for every kilometre (£400 for every thousand French yards), or 5 per cent. of the capital necessary for the construction of the railway; and yet that railway would not be solely destined to transport merchandise between Europe and the extreme East; it would also serve interests of no less importance, as it will be easy for us to demonstrate.

II.

The Euphrates Valley Railway would also be a bond of union between Europe and Persia, delivered up in this present day defenceless to the all-powerful influence of Russia, and having no communication with the other countries of Europe, but by a very difficult road, not always safe, and impracticable for six months of the year; that is to say, by the port of Trebizond and the mountains of Kurdistan. The projected railway, by its branch to Bagdad, situated almost on the confines of Persia, would draw this country from its dangerous isolation, and would bring it into connection with the Mediterranean. The advantage that would result from this to general commerce is easy to appreciate: the commodities which pass in the present day by Trebizond to Persia, and those which are expedited by that port from Persia to Europe, constitute altogether annually according to the *Annales du Commerce extérieur*, an amount which would be represented by eighty-five millions of francs, as a means which again represents according to our calculations 106,720

tons. As these commodities could be transported in thirty-six hours from Seleucia to Bagdad, they would necessarily take the new road. Now, if we estimate the transport of a ton at eight centimes the kilometre of railway, the transport of 106,720 tons would return 8,537 francs per kilometre, or for the whole extent of railway from Seleucia to Felujah, the point whence the branch to Bagdad would detach itself 9,904,159 francs; and these results would not be long in doubling or even tripling themselves, as has always been the case where a railroad has come to take the place of difficult communications.

III.

The resources which the projected railway will find in the actual localities that it will have to traverse, remain to be considered.

In former times, the commercial movement in the road of the Persian Gulf, and from Bagdad to Aleppo was immense; and the latter city, if the Arabian geographers are to be believed, was then the principal market of the world. It took three months to transport to Damascus and to Cairo, the amount of merchandise that was sold there in one day. (Rousseau Prospectus de l'Encyclopédie Orientale) and *vice versâ*; but it is not in our power to indicate even proximately the amount of this merchandise. It is not the same with respect to the traffic that takes place between Bagdad and Bussora. The information furnished upon this subject by M. Fontanier, Vice-Consul of France in the last of these towns are sufficiently precise: and it results from such information, that the mass of merchandise which passes between Bagdad and Bussorah, amounts to at least 40,000 tons, and amongst these commodities, coffee alone, coming from Mokka and other parts of Arabia, transmitted from Bussorah to Bagdad, represents an amount of 20 to 25,000 tons. We take from this traffic on 30,000 tons, which we consider as transportable

by rail, for a portion of the produce of Babylonia, flowing towards Bussorah would in all probability continue to avail itself of river transport. The transport of these 30,000 tons, estimated at eight centimes the ton for every kilometre, (1 halfpenny and three-fifths for every 100 French yards), would bring in 2,400 francs (96*l.* sterling) for every kilometre, and 1,860,000 francs (74,400*l.*) for the whole extent of line from Felujah to Bussorah.

But the profits of the projected line of railway cannot be appreciated from the commercial movement that is actually taking place in the countries through which it will be carried: it is the resources of the future that must mainly be relied upon; upon those which the railroad will itself inevitably give rise to. It must be borne in mind, that rapid means of communication will carry life and civilization into a region placed under the most benign sky, and which in an extent of nearly 2,000 kilometres, only presents about 430 of really unavailable desert, the rest of the country being admirably fertile. First, we have the pashalik of Bagdad, the ancient Seleucia spoken of by Strabo, as the finest portion of Syria, with a rich soil, susceptible of the highest cultivation, producing in the present day, in its actual neglected condition, delicious grapes, the most renowned tobacco in Asia, cotton, olives, and all descriptions of grain. Situated at the gates of Europe, this country placed beyond the reach of the exactions of Pasha's, and once fecundated by a railway, would not fail to attract numerous European colonists, who would know how to turn its resources to profit.

The Euphrates Valley Railway would, it can be thus satisfactorily attested, become immediately profitable at its origin, and it would indeed exercise a salutary influence to a far off distance, for it must be noted that all the great commercial routes converged from all times towards Seleucia;

hence we cannot but feel certain, that from the moment that a railroad shall bring that region in contact with the Euphrates, the station on the bank of that river, whether Rajill or Balis (or Ja'ber Castle), would at once transform itself into a great mart, to which the Arabs of the Desert would bring the wool of their sheep and the hair of their camels. On its side, the Euphrates would bring down the magnificent timber trees, which now rot upon the flanks of Taurus, and the diverse productions of Babylonia, of which we shall speak presently.

Next to the pashalik of Aleppo comes Mesopotamia, properly speaking,—the Mesopotamia of the patriarchs of old—a region given up in the present day to nomadic tribes, but which gained back to agriculture, would be one of the most productive in the world. The soil yields thirty or forty grains for one, and all kinds of cultivation succeeds admirably, wheat, barley, rice, every description of vegetable, cotton, sesamum, grape vines, olives, mulberries, oranges, citrons, &c. Here is then a whole territory to be conquered for the behests of civilization.

A desert of at least two geographical degrees of extent (between Abu Serai, ancient Cercusium in 35° lat. N. of Bagdad, and Bagdad, under 33° 11'), separates this country from ancient Babylonia, in the present day a dependency on Bagdad. It will be traversed by the projected railroad, in its greatest length (786 kilometres), and if that railroad had no other object than that of uniting the before-mentioned celebrated regions with the Mediterranean, still even then its utility would be incontestable.*

* This is not a precisely correct representation of the state of things. The desert region beyond the Khalur does not extend beyond Werdi, once the seat of a populous and prosperous community. From Werdi to Annah and below Annah to Felujah is Babylonia, the banks of the river are almost uniformly fertile, were at one time mostly under cultivation, and are still so to a great extent: (Translator.)

Our old Europe is, in fact, obliged to obtain from the other countries of the world, from America and from Africa, a portion of the corn necessary to the subsistence of its redundant population. England alone imports annually for its own consumption about 24 millions of hectolitres of grains and 207 millions of kilogrammes of flour of all kinds, taking the mean of five years (1849 to 1853), the results of which have been officially verified. To this amount must be added six to ten millions of hectolitres that Italy, the Germanic States, the Scandinavian States, and for the last ten years France herself, import every year. It so happens, that in a portion of Europe, the consumption exceeds the production by 30 to 35 millions of hectolitres. (The hectolitre is equal to 100 litres or French quarts, 22 gallons English.) In other portions, it is true, the production exceeds the amount consumed, but the balance is far from being in a state of equilibrium. It is sufficient to quote on this subject the results of an enquiry, which the British Government instituted about twenty-five years ago, in order to determine the quantity of corn accumulated in the granaries of all the countries of Europe, and what would be available for exportation. No small surprise was created by the result of the researches made by Mr. Jacob, a political economist, who was employed to carry them out, and which shewed that the excess of production over consumption in the countries considered as the feeders of others, did not surpass, in a whole, ten millions of hectolitres, of which scarcely one-fifth could be imported into England. Admitting that these countries could, in the present day, export fifteen millions of hectolitres, the general deficit of the European production would still amount to from fifteen to twenty millions of hectolitres every year, and there is every reason to believe that this deficit will keep on increasing in proportion to the augmentation of the population.

It will be understood after that, how useful it would be, how urgent, indeed, to Europe to attach itself by a railroad, a country which was formerly the granary of Asia; a country where the soil, upon an expanse of more than 40,000 square kilometres, every where returned, according to the unanimous testimony of all the writers of antiquity, as much as 200 grains to one.

Supposing that only half of the superficies of Babylonia was given up to the cultivation of cereals, that one quarter only was sown every year, and that the produce of the soil was only 100 grains for one, as in the lands of first quality in India (according to Buchanan) the production of Babylonia would still equal that of all France put together, with a population which only constitutes a twentieth or even less than that of France.

Europe could then draw its supplies open-handed from this fine country, where a railway would not fail to revive a cultivation so much neglected in the present day, and the cereals of Babylonia transported by this route to Seleucia, and thence by sea to Trieste, Leghorn, Genoa, Marseilles and London, would fetch the same price, if not less, as we have shown in our " Memoir," than the corn of Odessa, with this further advantage, that they would arrive there periodically at the beginning of spring, that is to say, at that epoch of the year when the price of corn is at its highest in our markets. We will not, however, estimate what these probabilities present to the future, we will keep within the limits of the present, to determine what will be the presumable revenue which the exportation of Babylonian cereals will give to our railway.

It is an incontestable fact, that the sedentary population of this pashalik can, with a little activity, draw annually from the soil 2,000,000 of hectolitres of wheat and rice for exportation. This will give about 140,000 tons of cereals to trans-

port by the railway, for a distance of 1,356 kilometres, taking the town of Hillah, ancient Babylon, as a point of departure. This transport would give, according to the French tariff (seven centimes per ton and per kilometre), 9,800 francs for every kilometre, and for the whole distance 13,278,800 francs (£531,152 sterling).

Further, a number of other products of Babylonia must be carried to the account of exportation, such as cotton, tobacco, saltpetre, soda, sal ammoniac, borax, and, above all, wool, camel hair and buffalo leather. The quantity of these commodities that will be exported may be estimated, at a minimum, as 30,000 tons, the transport of which, calculated upon the basis of eight centimes the ton for every kilometre, would give a total of 2,400 francs per kilometre, and for the mean distance of 1,356 kilometres = 3,254,000 francs. (£130,160 sterling). The exportation of Babylonian produce towards Europe would thus bring to the railroad, at the least, 12,200 francs for every kilometre, and for the transit from Hillah to Seleucia 16,533,200 francs, (£661,828 sterling) 4,000,000 francs less than the transit of merchandise from India.

As to the exportable production of the other countries traversed by the Euphrates Valley Railway, and to which we have previously referred, we will not endeavour to express it in figures. We leave to the future to fill up this blank, as also that which refers to the commodities imported from Europe into these countries, and the transport of which will necessarily be very profitable to the railway. The following consequences which attach themselves closely to one another, cannot, in fact, be separated; 1st, that the establishment of a line of rail, across that vast zone which is composed between the Mediterranean and the Persian Gulf, where nature has been prodigal of its gifts, would revive the

activity of the population, and would resuscitate cultivation, to industry and commerce; 2ndly, that Europe would profit, to a very great extent, by the exceptionable richness of nature in these countries; and 3rdly, that it would find in the same beautiful regions a new and profitable market for its industrial produce.

IV.

There remains to say a few words upon the movement of travellers, which is likely to take place upon the projected railway. We have proximately estimated the number in our "Memoir" at 100,000 every year for every kilometre, between Seleucia and Felujah, and 200,000 between the latter city and Bagdad.

This estimation is founded upon the following considerations:

1st. The Euphrates Valley Railway, being the most direct and the most convenient to go from Europe to India and *vice versa*, it will incontestably be at once adopted by all the travellers who go in the present day with the Indian Mail, by the Red Sea and Lower Egypt.

2ndly. The same road would connect together the cities of Aleppo, of Bagdad, and of Bussorah, where fairs are held that are renowned throughout all the East. It may then be assumed that a considerable portion of the mobile population of the country, who frequent these fairs in such large numbers, would avail themselves of this means of transport, in preference to a long journey on the back of camels. Let us remark here, that at the September fair at Bussorah, from 80 to 100,000 persons are seen, who have come from the different parts of Turkey in Asia, as well as from Persia, and most of them travel by the Valley of the Euphrates.

3rd. And lastly, the projected line of railway will present to the pious pilgrims of the two leading Musulman sects, the most ready and quick means of visiting the holy places which they both revere. The railway will, in fact, pass at its eastern extremity, close by the tomb of Ali, of his son Husain, and other points of pilgrimage continually visited by the Shiahs, a sect to which the whole Persian population belong, as well as a portion of that of Mesopotamia and of Kurdistan; and at its eastern extremity, the same line will strike all the different caravan routes that go from all parts of Turkey to Meccah, the city of Aleppo, being the general place of rendezvous of all these pilgrims.

To sum up, the estimate we have made, far from being exaggerated as will be seen, is on the contrary, only a minimum, which, in all probability will be enormously surpassed by the reality. Keeping, however, within these limits, the transport of 100,000 travellers from Seleucia to Felujah, and *vice versa* (1,150 kilometres,) will give a return of 11,500,000 francs, at an average of 10 centimes per person for every kilometre, (1d. per person for every 1,000 yards). The transport of travellers between Felujah and Bussorah, would produce 16,460,000 francs, and as a total, the presumed transit of travellers along the whole length of the line would produce an annual sum of 27,960,000 francs, £1,118,400 sterling.

V.

Let us recapitulate then the numbers which we have given as the minimum of the revenues of the projected railway.

	Rough Produce. Francs.
1st. Transport of 123,000 tons of merchandise from India	20,795,721
2nd. Transport of 106,720 tons of merchandise exchanged between Europe and Persia	9,904,199
3rd. Transport of 30,000 tons of merchandise between Bagdad and Bussorah	1,860,000
4th. Transport of 170,000 tons of the produce of Babylonia from Hillah to the Mediterranean.	16,533,200
5th. Transport of Travellers:— 100,000 for a portion of the line . . . . . 200,000 for the other portion	27,960,000
Total	77,053,080
Deducting 45 per cent. for the expenses of wear and tear, and keeping up the Railway . .	34,673,886
There remain a clear revenue of . .	42,379,194
	(Or £1,695,167 15 10.)

Or about 10¼ per cent. of the capital necessary for the construction of the railway. And how many sources of revenue have we not indicated which do not enter into this estimate, but which the future will most indubitably have to evolve? Are we not justified in believing from that, and from all the other considerations developed by us, that the returns of the railway will amount to double the proceeds which we have discreetly given. A net annual produce of 20 per cent. on the social capital is then the result that can be anticipated without any exaggeration from an enterprise which will bring Europe into union with the richest countries of Asia, the Mediterranean, and the Indian seas; *and let it be noted that the competition of the projected maritime canal by the Isthmus of Suez, can in no way detract from the importance of the Euphrates Valley Railway route, which will present a saving of at least twelve days in the journey from Europe to India as compared with the steam navigation of the Red Sea and the canal in question.*

VI.

It is, indeed, in this last point of view more especially that the Euphrates Valley Railway will present an unparalleled importance. It may be distinctly affirmed that it will exercise a decisive influence upon the future of the Ottoman empire, which has its real basis in Asia. No political measure can possibly have the same efficacy in regenerating the old Asiatic East, that is to say, bring back cultivation, industry, commerce, and the arts to those celebrated countries which were once the cradle of civilization, and consolidate the power of the Porte by centralising the scattered yet vivacious forces which it possesses. The Turkish government would then find abundant resources with which to restore its finances. It would, further, be enabled better to restrain the turbulence of the Arab tribes, to watch over the administration of Pashas too prone to disobedience, to keep in check Persia, that old rival of Turkey, now a tool in the hands of Russia, and if war should ever break out again with the latter power, the Euphrates Valley Railway would give to Great Britain the means of transmitting troops from India to the assistance of its ally with great rapidity, and to take up a position as opposed to Russia, of far greater strategical importance than in the last war.

If then the strengthening of the Ottoman empire is of importance to the security of the world, and who would doubt it in the present day? the projected railway is most assuredly one of the most powerful and most practical ways of arriving at that end. This double character of high commercial and political utility, which attaches to the project of which we here present a sketch, makes us hope that it will be favourably received by the governments, by the capitalists, and all the well-informed men who enlighten public opinion in Europe. If the difficulty of being able to

raise under existing circumstances, a capital of 400 millions, (of francs) and of carrying out an enterprise of the proposed description in a country inhabited by nomadic races, is urged, we shall answer that these difficulties are rather apparent than real.

The capital of 400 millions will not be exacted, we have before said, but by annual instalments of 30 or 40 millions at the most.

In two years, the first section, the expenses of constructing which have been valued at 58,500,000, or 60,000,000 francs in round numbers, (150,000 francs per kilometre,)* would be concluded, and it would soon give good results. It is only then, that the works of the next section would be begun. The cost of the latter would amount to about 200 millions (250,000 francs per kilometre,) it would demand from 4 to 5 years of labour; but that second section concluded, the end that we purpose to ourselves would be in reality attained. The line of railway would in reality be brought to a point (Hit), from whence the Euphrates is navigable the whole year round. The working of the two sections of the railroad could then be combined with a regular service of steam boats from Hit to Bussorah, as also between the first of these towns and Bagdad, the two being connected by a navigable canal.

By this means the journey from Seleucia to Bagdad would be accomplished in two days, to Bussorah in five days, and to Bombay in thirteen days, nearly three days less than is required to make the journey from Bombay to Alexandria, even considering the railroad from Alexandria to Suez, as carried out from one end to the other, and in full

* The expenses of opening the Port of Seleucia to ships of commerce, estimated by us at 15 millions of francs, are comprised in the 58,500,000 francs.

activity. There would then be nearly three days gained in the communications between Europe and India, for Alexandria and Seleucia are at equal distances from Malta. Such results show pretty clearly that the expenditure of 260 millions would not be fruitless. Should it ever be necessary to postpone for some years the execution of the third section, which is required to complete the line, and the expenses of constructing which are estimated at 135 to 140 millions (150,000 francs per kilometre).

Nothing then in reality opposes itself to the proposed undertaking, notwithstanding its colossal proportions; should it be carried out gradually, should it meet with an interruption, or should it be completed as a whole, or only in part, no mischief could accrue to the shareholders.

With 400 millions of francs a line of capital importance to the commerce of the world would be constructed. With 260 millions only, a part only of such a line of railway would be constructed, which would still be very useful and very productive. We do not believe the financial resources of Europe to be so exhausted that a capital of 400 millions could not be collected in ten or twelve years to carry out an undertaking of such vast importance.

As to the dangers, which people who only know the East from exaggerated reports of a few travellers, fancy will be in the way of the works being carried out, it is sufficient to remark, that the nomadic tribes of these countries are few in number, badly armed, without discipline, and always divided among themselves. A few regular troops dispersed along the line would suffice to protect it against all the Arab and Kurd shepherds, and the benefits that would accrue from the undertaking to the Turkish Government would more than repay them the expense of keeping up their military posts. But, besides this, the mercantile spirit of Arab tribes, who constitute the great majority of the nomadic population of

these countries, there cannot be the slightest doubt, would accommodate itself easily to so rapid a means of communication, and which would give to them the advantage of being able to frequent at a trifling expense the great fairs of Aleppo, of Bagdad, and of Bussorah, and which would open new outlets to their products, by the sale of which they gain their livelihood. The English scientific commission which carried on such extensive labours in these countries, had opportunities of convincing themselves of the good disposition of the Arabs towards Europeans when they have commercial advantages in prospect. The Amirs came then to Colonel (now General) Chesney, with offers of submission to the Queen of Great Britain. Thus falls the last objection raised against a project, the execution of which is practical and the advantages incalculable.

JULES FALKOWSKI.

PROSPECTUS.

The Honourable East India Company has determined to lay a telegraph cable from Kurrachee to the head of the Persian Gulf.

The Austrian Government has established a Company with the requisite capital, paid up and guaranteed by the State, for constructing and laying down a Submarine Electric Telegraph, in connection with its land lines, from Cattara, or Ragusa, on the coast of the Adriatic, touching at Corfu, Zante, and Candia, to Alexandria, and thence by Jaffa and Beyrout to Seleucia; and have just concluded a contract for the immediate execution of the work.

The Austrian Company gives to the English Government and the East India Company a priority over the public in transmitting their messages.

The European and Indian Junction Telegraph Company Limited is established with the view to continue the electric communication from Seleucia, along the line of the proposed railway, by Aleppo, Ja'ber Castle, and the valley of the Euphrates, to the head of the Persian Gulf, thus completing the only remaining link between India and England.

The English Government will soon be able to communicate with Malta and Corfu, by a line to those islands from Cagliari in the Island of Sardinia, to which point the Mediterranean Electric Telegraph is advanced.

From Cagliari, the French and Sardinian Governments will have direct telegraphic communication with Alexandria and the East.

All parts of India are or are about to be brought in telegraphic communication with Kurrachee, and the cable from thence of the East India Company, to the head of the Persian Gulf, with the wires to be laid down by this Company will bring India by nearly 2,000 miles nearer England and the continent.

When the Submarine and Indian systems meet at Seleucia, the connection between the East and West will be complete, and England, the Continent and India be in hourly communication.

From the arrangements contemplated, it is certain that the best and safest telegraphic routes will be secured to this country.

The Austrian Government has most strikingly evinced its interest in this great undertaking, and its desire to maintain the position as the medium of communication between other nations, by undertaking the completion of so large a portion of the line.

The British Government and the Honourable East India Company duly appreciate the power of supervision and control put into their hands by the telegraph, binding together in one the isolated and distant dependencies of the Empire, and are prepared to extend their countenance and support in a fair and liberal spirit.

The merchant and the ship-owner are well acquainted with the inestimable value to them, of the power of imparting and receiving prompt information. It is well known that heavy loss has been suffered by the Indian mercantile community, through the non-receipt of immediate news of the adoption of the Austrian propositions for peace. The heavy contracts made in Calcutta and Bombay in January last for oil seeds, jute, and saltpetre, would have been prevented by a single message.

But the grand source of revenue will be derived from the

constant desire to communicate which is felt by members of families when at a distance from each other; and when it is considered how many thousands of families in England have some near relative in India, the revenue, it is believed, from this source alone, will be very large.

From the most reliable data that can be collected, the Directors feel confident that, besides the pecuniary assistance that may be expected from Government and the Honourable East India Company, a highly remunerative return may be expected on the capital embarked.

The Directors have the satisfaction of stating, that they have secured the valuable co-operation and assistance of Mr. John Watkins Brett, the inventor and projector of the Submarine Telegraph.

Mr. O'Shaughnessy, superintendent of telegraphs in India, having already laid down in that country 4,000 miles of electric wire with extraordinary economy and success, and as the cable in connexion with the Indian system is about being carried from Kurrachee to Kurnah at the head of the Persian Gulf under his supervision, an application has been addressed to the Court of Directors of the Honourable East India Company with the view to secure the advice of this eminent and successful officer to this Company, so as to insure uniformity of design and management throughout, from Calcutta and Peshawer, Bombay and Madras to Seleucia. The Honourable Court have already intimated that they "would have no objection to the experience which he (Mr. O'Shaughnessy) has acquired in India being made available for the line through Asiatic Turkey."

"The electric telegraph is the most beautiful and surprising invention of the age, and nothing is more interesting than to learn its rapid progress and wonderful results. The telegraphs of America are surpassed in length, solidity of construction and cheapness of working, by those which

within the last few years, while we at home have been debating and fighting on the Eastern question, have been carried over the length and breadth of India. From Calcutta to the Indus, to Bombay, to Madras, the messages of Government and individuals are speeded in a few hours at a cost comparatively trifling. Ceylon is to be united to the mainland, and the time is already looked upon as near when the telegraph will cross the Mediterranean, run along the Red Sea and the coasts of the Indian Ocean (or rather by the Euphrates and Persian Gulf), and unite London and Calcutta in hourly communication. We cannot doubt that this work will be soon achieved, and that no very long period will elapse before the wires extend to Canton and Shanghai, and perhaps, running from island to island, will stretch on to Sydney and Melbourne, and the great settlements of the antipodes."—*Times, June* 16, 1856.

No call will be made until the concession has been secured by the Firman of the Sultan, and the other arrangements contemplated by the Directors are completed.

From W. P. ANDREW, Esq., to Sir JAMES C. MELVILL, K.C.B., &c.

Gresham House, Old Broad Street,
17th June, 1856.

SIR,

Understanding that the Honourable Court has it in contemplation to bring the lines of telegraph already established in India, with so much success by Mr. O'Shaughnessy into a near proximity to those in Europe, by laying an electric cable from Kurrachee to the head of the Persian Gulf, and as I have in conjunction with General Chesney and others, taken the necessary steps towards obtaining the sanction of the Turkish Government for laying electric wires in Asiatic Turkey, and am also acting in concert with Mr. Brett and other representatives of European Telegraph Companies, I beg to submit for the consideration of the Honourable Court, a proposal to complete the telegraph communication between England and India, by connecting the cable proposed to be laid down to Bussorah by means of an electric wire carried along the Euphrates by Ja'ber Castle and Aleppo, to Seleucia, at which point it would form a junction with Mr. Brett's submarine cable, now advanced to Cagliari, in the island of Sardinia, the remaining portion of the communication being through Piedmont and France, this arrangement would afford to England the best and safest telegraphic route to her Indian possessions.

Should the court feel inclined to entertain favourably the proposal I have now the honour to submit, I shall be prepared hereafter to furnish more detailed information regarding the project.

In the meantime, I may state, that Mr. O'Shaughnessy concurs in the perfect feasibility of what I now propose, and

his views are confirmed by Mr. Ainsworth, who has surveyed the country from Seleucia to Bussorah, and other scientific gentlemen practically acquainted with the country and its people who assure me that there are no physical or other difficulties that may not be easily surmounted.

In the event of a company being formed to raise the necessary capital, it would be the wish of those gentlemen who are associated with me, that the Honourable Court would be good enough to permit Mr. O'Shaughnessy to be the consulting engineer to the company for laying down the wires which would unite the English and Indian systems.

The services of this distinguished gentleman would not only be valuable from his practical experience in India, but uniformity of plan and management would be ensured with that of India throughout the lines until they approached those of Europe on the shores of the Mediterranean.

I have the honour to be,
&c., &c., &c.,
(Signed) W. P. Andrew.

Sir James C. Melvill, K.C.B.,
&c., &c., &c.

From W. P. Andrew, Esq., to the Right Honourable The Earl of Clarendon, K.G., &c.

23rd *June*, 1856.

My Lord,

As the Chairman of the Scinde and Euphrates Valley Railway Companies, I am desirous of establishing telegraphic communication between England and India, by forming a connection at Seleucia with Mr. Brett's submarine cable, and carrying the electric wire *via* Aleppo and the Euphrates, to the head of the Persian Gulf, and from thence

by submarine cable to Kurrachee in Scinde, where the junction would be effected with the 4,000 miles now in effective operation in India; and as I feel assured that a subject of such vast political and social importance must soon be submitted to your Lordship's consideration, I have the honour to enclose for your lordship's information a duplicate of a letter having reference thereto, which I addressed on the 17th instant to the Court of Directors of the Honourable East India Company.

Should it be decided to adopt the route I have suggested above for the telegraph, it would of necessity nearly follow that of the proposed railway from Seleucia to Bagdad and Bussorah, and the same management and protection might suffice for both undertakings.

I expect General Chesney in town in a few days, and in the meanwhile I shall be ready at any time to wait upon your Lordship, should you desire any further information.

I have the honour to be, &c.,
(Signed) W. P. ANDREW.

The Right Honourable
The EARL OF CLARENDON, K.G.,
&c., &c., &c.

From Sir JAMES C. MELVILL, K.C.B., to W. P. ANDREW, Esq.

East India House,
10th July, 1856.

SIR,

I have received and laid before the Court of Directors of the East India Company your letter dated 17th ulto., stating that you have in conjunction with Major-General Chesney and others, taken the necessary steps for obtaining the sanction of the Turkish Government for laying electric wires in Turkish Arabia, and submitting a proposal for a line from Seleucia *via* Ja'ber Castle and the Valley of the

Euphrates to Kornah, in continuation of the submarine cable laid down in the Mediterranean by Mr. Brett.

In reply, the court desire me to state, that while they would be much gratified to see the work in question properly carried out, the arrangement connected with the undertaking, must necessarily be left to the Turkish authorities for settlement, and they can only repeat the assurance already given to Her Majesty's Government, that they will be prepared to undertake the construction of a line of telegraph between Kurrachee and the Turkish territory, upon learning that the communication between this country and Kornah has been established.

With reference to the request contained in your letter, that Dr. O'Shaughnessy may be employed as the consulting engineer of the company which you desire to form for the execution of the work contemplated by you, I am commanded to state that Dr. O'Shaughnessy has already directed his attention to, and submitted his views and recommendations upon, the subject of the line in question, and the court would have no objection to the experience which he has acquired in India being made available for the line through Asiatic Turkey, although Dr. O'Shaughnessy is, of course, not at liberty to enter into any engagement with private companies.

I am, &c.,

(Signed) James C. Melvill.

W. P. Andrew, Esq.

&c., &c., &c.

From W. P. Andrew, Esq., to Sir James C. Melvill, K.C.B., &c.

European and Indian Junction Telegraph Company Limited,
Gresham House, Old Broad Street,
London, 5th August, 1856.

Sir,

Adverting to your communication of the 10th July, in which you express the interest of the Honourable Court

in introducing the electric wire in Turkish Arabia, and that the court would have no objection to the co-operation of Mr. O'Shaughnessy being made available for the telegraph company I had proposed, I am now requested by the distinguished and scientific gentlemen with whose co-operation I am honoured, to forward for the information of the court, a prospectus of the European and Indian Junction Telegraph Company, and a copy of a letter addressed by Mr. J. A. M. Pinniger to the Secretary of the Treasury, and also one from the former gentleman to myself, explanatory of an arrangement entered into with the Austrian Government, for the establishment of telegraphic communication by means of a submarine cable from Ragusa, on the Adriatic, to Alexandria and Seleucia.

By means of the electric telegraph passing through Belgium and the Austrian dominions, England is already in telegraphic connection with the coast of the Adriatic, the submarine cable from thence, from Ragusa to Seleucia, and the wires proposed to be laid down by the European and Indian Junction Telegraph Company from Seleucia and Kornah, at the confluence of the Euphrates and Tigris, meeting at the last-named point, the submarine cable proposed to be laid down by the Honourable Court from Kurrachee along the Persian Gulf, would place London in telegraphic intercourse with all parts of India, by meeting at Kurrachee the telegraphic system already established with so much success in that company.

I have to express the satisfaction of my co-directors at the assurance that the court will be prepared to undertake the construction of a line of telegraph between Kurrachee and the Turkish territory, upon learning that the communication between this country and Kornah has been established.

I have also to express the acknowledgments of the directors of this company, for the consideration of the court, in per-

mitting the great experience of Mr. O'Shaughnessy in India to be made available for the line through Asiatic Turkey.

The directors of this company attach the greatest importance to the line along the Euphrates to be constructed and worked on the same principle as those so successfully carried out by Mr. O'Shaughnessy in India; and with this view, the directors will require that their contractor shall avail himself to the fullest extent of that gentleman's counsel and supervision.

The political, commercial, and social advantages to be derived from placing England and India in almost hourly telegraphic communication, are apparent to the Honourable Court, and as it is believed, the safety and prosperity of India must be promoted thereby in no ordinary degree, I am to request that you will submit for the consideration of the court, whether the moderate capital of £200,000 of this company might not have a rate of interest guaranteed, the proceedings of the telegraph company being subjected to the same supervision and control as the Indian railways.

The Turkish, Sardinian, and Austrian Governments having already guaranteed interest on capital for the construction of electric lines out of their dominions, I feel assured that the Honourable Court will entertain the proposal for support and co-operation, I have had the honour to submit, in an enlightened and liberal spirit.

I have the honour to be,
&c., &c., &c.,
Your most obedient Servant,
(Signed) W. P. Andrew,
Chairman.

Sir James C. Melvill, K.C.B.,
&c., &c., &c.

From WILLIAM AINSWORTH, Esq., F.G.S. and F.R.G.S., to W. P. ANDREW, Esq., Chairman of the European and Indian Junction Telegraph Company.

13th August, 1856.

DEAR SIR,

I have much pleasure in transmitting to you my ideas upon the subject of telegraphic communication from Seleucia to the Persian Gulf, along the Valley of the Euphrates.

In doing so, I must premise that my acquaintance with the countries to be traversed is not only derived from explorations made as Geologist and Mineralogist to the Euphrates expedition under General Chesney, but also from opportunities subsequently afforded to me when in charge of an expedition sent to the same and neighbouring regions by the Royal Geographical Society.

In the first place, then, it is to be premised that there exist no physical obstacles whatsoever to conveying an electric chain between the two points proposed. The country is throughout comparatively level, easy for access, with most of the materials of labour at hand. The utmost elevation of the line of watershed between the Mediterranean and the Euphrates, along the line of levels carried by the officers under the command of General Chesney, was 1,750 feet, with a very gentle ascent; and the height of the bed of the Euphrates, at the termination of the same line of levels, was 550 feet.

The rise of ground on the direct line to Aleppo is still less. There is a tract of hard limestone to cross on the line to Aleppo; but there are no mountains, rivers of any magnitude, ravines, or any other obstacles that are worthy of notice, to be overcome.

It is almost needless to add, that once the Valley of the Euphrates attained, there is an almost continuous and uninterrupted gradual descent to the Persian Gulf, The soft and friable rocks approach the river at but few points, and, with the exception of the basaltic ridge at Zelebeh, and a patch of hard limestones on the left bank at Annah, never attain an elevation much exceeding 100 feet; and the basalts leave a river-margin wide enough for several lines of railway.

Throughout, the same circumstances which give such unusual facilities to the prolongation of a line of railway along the Valley of the Euphrates, naturally also apply themselves to the prolongation of a line of telegraphic communication.

The difficulties which present themselves are solely such as may be anticipated from the semi-barbarous condition of the people inhabiting the country, and these I believe to be very generally exaggerated.

Almost all possible accidents would be anticipated, were proper precautionary measures adopted.

The precautionary measures I allude to would be, first, the support of the Ottoman Government, and of the local authorities; and secondly, the countenance of the Arab Sheikhs, which could be obtained by a very trifling subsidy, to be paid so long as the wire remained intact, and to be withdrawn or forfeited when it was injured.

This would be the cheapest kind of surveillance that could be obtained in the countries in question.

It would be further essential to explain to the Arab Sheikhs the nature of the objects proposed.

They would explain the matter again in their own way to their followers, and it is a great mistake to suppose that the Arabs would not be open to such an explanation (although not expected to understand the *modus operandi* any more

than a European peasant), and that they would not be influenced by the moral obligations imposed upon them.

The immediate object of such explanation would be to more particularly do away with all suspicions or superstitious ideas, which might otherwise be associated with the laying down of a line of telegraphic communication.

There is every reason to believe, however, that the simple statement, that the Electric Telegraph was used to convey the messages of the Sultan, would protect it from all accidents.

Once the valley of the Euphrates attained, the population of its long banks are for the most part pastoral and agricultural.

The country is certainly exposed to the inroads of the Bedouin Arabs, but even then I do not believe the Arab to be wantonly destructive.

The existence of so many and of such extensive remains of olden times scattered over their country, attest to the contrary.

There are medieval castles in the Valley of the Euphrates claimed by no one, and untenanted, yet which are in part inhabitable to the present day. Nesjm Kalah is a remarkable instance of this kind. Inscriptions on dry mud have existed untouched from the days of the Caliphs. The habits of the Arabs leading them to disdain stone for building purposes, edifices of olden time are much less injured among them than they would be elsewhere. In what other country would a Palmyra be found abandoned to the first comer, yet almost unscathed?

The Euphrates Expedition left two or three guns at Port William, in 1836. The natives respected them so far that Hafiz Pacha used them in the defence of Birijik in 1839.

I have seen a small collection of Roman coins, in an Arab tomb, at Balis. The people had found them; they did not know what to do with them; yet they did not wantonly

throw them away. They had belonged to some departed race, they would consecrate them then to their dead. Examples of this kind might be almost infinitely multiplied.

In case the system of subterranean wires is adopted, it would require the same precautionary measures to be taken as in the case of a line upon posts, but it is evident that the wires would be far less exposed to accidents.

A line from Seleucia by Aleppo to Balis would connect itself by the Valley of the Euphrates with the projected Railway at Ja'ber Castle, at Aleppo, at Seleucia, and, if deemed advisable, at Antioch, so as to answer all the purposes of the Railway; and for the remainder of the distance along the Valley of the Euphrates and Tigris, it would probably follow the same route.

A third plan of carrying an Electric Telegraph presents itself along the Valley of the Rivers Euphrates and Tigris, different from those before alluded to, and that is along the bed of the rivers.

The advantage gained in distance by saving the bends of the river, and which would amount to probably about one-fifth of the whole distance, point to a line of Telegraph on posts, or to a subterranean cable, as being preferable to a fluviatile one. The soil of the Valley of the Euphrates is peculiarly adapted for the latter system, being for the most part river alluvium, and when not so, composed of soft and friable rock formations (marls, gypsum, and red sandstones), easily cut, or through which tunnels could be bored with great facility.

There is nothing, indeed, in the Euphrates Valley that will compare for a moment with India or other countries through which Electric Telegraphs have been carried, dependent or independent of Railways. Nature has positively left there a great open gap, with almost unexampled facilities for all such undertakings, whether Railway or Telegraph.

From the parallel of Aleppo there are no glens, ravines, or narrow, precipitous, rocky passes whatsoever. Rocks abut upon the river at a few points, but only so as to leave a margin for many lines of Railway or Electric Telegraph.

It is to be presumed that the Telegraphic cable, upon reaching the alluvial plains of Babylonia, a little above Felujah, will be carried across that plain to Bagdad, in consequence of the importance of that place as a commercial emporium.

For this brief distance no more difficulties would present themselves than elsewhere to a line on posts or to a subterranean cable.

But whether the Valley of the Euphrates is followed south of Felujah, or that of the Tigris, south of Bagdad, it may remain a question if it will not be advisable to carry the cable thence forward along the bed of either river, on account of the existence of extensive tracts of marsh, which would necessitate a line of posts, or a subterranean cable being carried at certain points at a distance away from the banks.

In the latter case the Tigris presents some slight advantages over the Euphrates, in having for the greater part of its course firmer banks.

In conclusion, however, as far as my own experience goes, and after a careful consideration of the subject in all its bearings, I do not see any reasons why, under ordinary circumstances, a common Electric Telegraph of insulated wires, suspended in the air upon posts or standards of wood, iron, or stone, should not be adopted for the whole length of the line projected.

I have the honour to be, &c., &c.,

(Signed) WILLIAM AINSWORTH,
F.G.S. and F.R.G.S.

From J. D. Dickenson, Esq., Deputy Secretary East India Company, to W. P. Andrew, Esq.

East India House, 12*th September*, 1856.

Sir,

The Court of Directors of the East India Company have had under their consideration your letter dated the 5th ultimo, forwarding a prospectus of the European and Indian Junction Telegraph Company, together with copies of letters from Mr. J. A M. Pinniger, explanatory of an arrangement entered into with the Austrian Government for the establishment of telegraphic communication from Ragusa on the Adriatic to Alexandria, and Seleucia, from which place the European and Indian Junction Company propose to extend it to Kurnah, and submitting for the court's consideration whether the capital of £200,000 might not have a rate of interest guaranteed by the East India Company, the proceedings of the telegraph company being subjected to the same supervision or control as the Indian railways.

In reply, the court desire me to state that the arrangements connected with the establishment of the line of telegraph proposed by the European and Indian Junction Company, must rest with Her Majesty's Government, and with the governments and tribes through whose territories it is designed to carry it; and that the court are at present unable to enter into any agreement with the telegraph company, or to afford any pecuniary assistance or guarantee. But the court desire me to state, that in the event of the telegraph company being employed with the sanction and support of Her Majesty's Government, and the other governments concerned, to establish the line in question, the East India Company would be prepared to enter into an arrangement for making an annual payment to the Telegraph Company for the use of the line upon terms and conditions to be agreed upon.

I am, &c.,

(Signed) J. D. Dickenson.
Deputy Secretary.

To W. P. Andrew, Esq., &c., &c., &c.

From W. P. Andrew, Esq., to James Wilson, Esq., M.P.

1st *October*, 1856.

Sir,

I have the honour as Chairman of the Board of Directors to address you upon the subject of the line of telegraph projected by this company, in consequence of a letter received by me from the Court of Directors of the Honourable East India Company, on the 12th ultimo, to the effect that the arrangements connected with the establishment of the line of telegraph proposed by the European and Indian Junction Telegraph Company, must rest with Her Majesty's Government, and that of the Sublime Porte, but in the event of this company being employed by the Governments in question, the East India Company would be prepared to enter into an arrangement for making an annual payment to the Telegraph Company for the use of the line upon terms and conditions to be agreed upon.

No. 1.—Letter from Sir Jas. C. Melvill to W. P. Andrew, Esq., July 16th, 1856.
No. 2.—Letter from W. P. Andrew, Esq., to Sir J. C. Melvill, K.C.B., 5th Aug., 1856.
No. 3.—Letter from J. D. Dickenson, Esq., to W. P. Andrew, Esq., 12th Sep., 1856.
No. 4.—Prospectus of the European and Indian Junction Telegraph Company Limited.

2. I beg to annex for the information of the Lords Commissioners of Her Majesty's Treasury, copies of the documents noted in the margin referring to telegraphic communication with India.

3. It having been understood that the East India Company was prepared to lay down a telegraph between Kurrachee and the head of the Persian Gulf, and that the Austrian Government had established a company with the requisite capital for laying down a submarine electric telegraph in connection with its land lines from Cattara or Ragusa, on the coast of the Adriatic, to Alexandria and Seleucia. The European and Indian Junction Telegraph Company was formed with the view to continue the electric communication from Seleucia along the proposed line of the Euphrates Valley Railway Company by Aleppo, Ja'ber Castle, and the Valley of the Euphrates to the head of the Persian Gulf, thus completing the only remaining link between India and England.

5. The board is composed of gentlemen well acquainted with India, and with the country to be traversed by the telegraphic wires, and the application for shares in a few days amounted to nearly four times the number to be alloted.

6. The company has now received its certificate of incorporation, and only awaits the formal sanction of the Ottoman Government, and the necessary support and concurrence of Her Majesty's Government to commence active operations.

7. When His Highness Aali Pasha, the Grand Vizier of the Turkish Empire was in this country, I had, in conjunction with General Chesney, several interviews with His Highness and M. Musurus, the Turkish Ambassador, regarding the establishment of railway and telegraphic communication between the Mediterranean Sea and the Persian Gulf, and two seperate missions are now at Constantinople in accordance with the arrangement entered into with the Grand Vizier, with the view of obtaining the formal concession for the railway and the telegraph, to the companies of which I am chairman.

8. I beg on behalf of the gentlemen with whom I have the honour to be associated, to submit the project of this company to the consideration of the Lords of the Treasury as deserving their support, and I respectfully request that if the route proposed be satisfactory to the Government (as I have assumed it to be) the line should be adopted by them as a link in the route to India, and in which case I have every reason to know that the Court of Directors of the East India Company is prepared to extend to the undertaking liberal pecuniary support.

9. The line can be completed in two years, and with the sanction of the East India Company, it is proposed to take advantage of the experience gained by Mr. O'Shaughnessy in erecting telegraphs in India, and to associate this zealous and scientific officer in the construction of the line proposed by the company.

10. It will afford me much gratification to wait upon you for the purpose of affording any further information, should it be deemed desirable.

I am, &c.,

(Signed) W. P. ANDREW.
Chairman.

JAMES WILSON, Esq., M.P.
&c., &c., &c.

P.S.—Since the above was written, the Earl of Clarendon has forwarded to me a telegraphic dispatch from Constantinople, copy of which is sent herewith for your information:

From E. HAMMOND, Esq., to W. P. ANDREW, Esq.

(EXTRACT.)

Foreign Office, 26th October, 1856.

SIR,

I am directed by the Earl of Clarendon to acknowledge the receipt of your letter of the 20th instant, and I am to state to you in reply that Her Majesty's Ambassador at Constantinople has reported that he has already introduced Mr. Robinson to the Turkish Government, with a view to his entering into negotiations regarding an Electric Telegraph between the Mediterranean and the Persian Gulf.

Lord Clarendon will instruct Her Majesty's Ambassador at Constantinople to afford his countenance and support to Mr. Robinson as Commissioner for the Euphrates Railway Company during the absence of General Chesney.

I am, Sir,

Your most obedient humble Servant,

(Signed) E. HAMMOND.

To W. P. ANDREW, Esq.
&c., &c., &c.

From W. P. Andrew, Esq., to James Wilson, Esq., M.P.

(No. 11.) *20th November*, 1856.

Sir,

With reference to a letter which I had the honour as Chairman of the above Company to address to you on the 1st ultimo, to the effect that this Company was formed with a view to establish telegraphic communication with India, *via* Seleucia, the Euphrates and the Persian Gulf in conjunction with the Austrian system of telegraphs about to be laid down from Cattara or Ragusa to Seleucia on the one side, and the proposed cable of the Honourable East India Company from the head of the Persian Gulf to Kurrachee on the other, and that the Company had received its certificate of Incorporation and had opened negotiations with the Porte for the necessary permission to pass through the Turkish territory, I have the honour to request that you will be good enough to submit to the Lords Commissioners of Her Majesty's Treasury the formal proposition of this Company, for the construction of the Telegraphic Line from the Mediterranean to the head of the Persian Gulf, on receiving from Her Majesty's Government an assurance of such pecuniary support as would secure a fair return on the capital embarked in the undertaking.

I am, &c.,

(Signed) W. P. Andrew.
Chairman.

James Wilson, Esq., M.P.
Treasury, &c., &c.

THE SCINDE RAILWAY COMPANY.

Offices: Gresham House, Old Broad Street, City.

BOARD OF DIRECTORS.

Chairman.

W. P. ANDREW, Esq., F.R.G.S. (26, Montague Square.)
Chairman Euphrates Valley Railway and European and Indian Junction Telegraph Companies.

Ex-Officio Director.

SIR JAMES C. MELVILL, K.C.B.

SIR HERBERT MADDOCK, M.P., late Deputy Governor, Bengal, Director Euphrates Valley Railway Company.
J. EDMUND ANDERDON, Esq., Director of the Bank of London, and Euphrates Valley Railway Company.
HARRY BORRADAILE, Esq., late Bombay Civil Service, Director Euphrates Valley Railway Company.
THOMAS WILLIAMS, Esq., Director Euphrates Valley and other Railway Companies.

Auditors.

ALEXANDER MACKENZIE, Esq. Director of the Oriental Bank Corporation.

MAJOR JOHN A. MOORE, F.R.S., Director National Provincial Bank of England.

Engineer.

T. A. YARROW, Esq.

Bankers.

Messrs. SMITH, PAYNE, and SMITHS.

Solicitors.

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Secretary.

THOMAS BURNELL, Esq

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Solicitors.

Messrs. MARTEN, THOMAS and HOLLAMS.

Secretary.

THOMAS BURNELL, Esq.

REPORT.

Second Report of the Directors of the Scinde Railway Company to the Proprietors, submitted at the First Half-Yearly General Meeting, held on the 4th day of November, 1856, at the Offices of the Company, Gresham House, Old Broad Street, City.

The First Half-Yearly General Meeting has been convened in conformity with the Act of Incorporation of the Company.

The Directors have the satisfaction to report, that since their last meeting with the Proprietors, such an addition has been made to the staff of the resident engineer as to enable him to complete the survey of the country through which the Line is to pass, and that they have recently received through their agent in India, the resident engineer's report accompanied by plans and sections in reference to various surveys prosecuted at the requisition of the Bombay Government.

The Directors await the decision of the authorities as to the selection of the exact route the line should take from Kurrachee to Hydrabad, to enable them to proceed with the construction of the railway.

In their first report, the Directors announced that they had contracted for thirty miles of permanent way material, the shipment of which, is nearly completed. Contracts have also been entered into upon favourable terms for the material for a further thirty miles of railway.

The importance of having improved means of communication along the valley of the Indus, is every day becoming more apparent. Sir Justin Sheil, late British ambassador in Persia, has recently advocated the great political advantages to be derived from "a railway running the whole length of the left bank of the Indus."

For commercial and social, as well as State purposes, the improvement of the transit along this ancient line of communication has become a necessity.

Holding as we do, the Indus from Cashmere to the sea, we have a power which, if "well understood and wisely improved, puts us in possession of the key to the whole commerce of Central Asia, which cannot be pursued without adding to the prosperity and productiveness of our new territories (Scinde and the Punjaub)." *

The resources of modern science judiciously applied to this line of communication would be of inestimable benefit to our own provinces, and the enterprising European merchants, now resident at Kurrachee, would soon afford a medium for extensive shipments from the Punjaub and provinces to the north-west of Delhi and the distribution of our manufactures to the remote valleys of Afghanistan as far as Herat, and in Balkh, Khiva and Bokhara.

The local authorities, especially Mr. Bartle Frere, the Commissioner in Scinde, and Sir John Lawrence the Chief Commissioner in the Punjaub, concur in the necessity of

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* The Economist.

affording to the provinces drained by the Indus and its tributaries a free access to their port of shipment. The latter of these distinguished gentlemen, in a recent dispatch to the Government of India, makes the following forcible remarks :—

"*Indeed, these two essentials, viz., the railroad and the steamers, may be said with truth to be the crying wants of the Punjaub in the department of public works. These provided, the commerce and produce of these territories will be turned to their due course, viz., the Indus and its feeders, and to their natural outlet, viz., the Port of Kurrachee.*"

"For the railroad the face of the Doab offers an unusual equality of surface, while it possesses few or none of the requisite resources for metalling a road. For the rivers, it were preferable, instead of improving the navigable stream, to concentrate all efforts on the provision of powerful steamers of the smallest possible draught. The Chief Commissioner, while deprecating any general extension of the public works department in the Punjaub for the present, would yet beg most earnestly to press these cardinal objects on the attention of the Government. He believes that, if carried out, they would effect more for the development of the resources of those territories than any other work, or number of works, that could be devised."

A railway from Mooltan to Lahore and Umritser would not only afford an outlet to the impeded traffic of the Punjaub and neighbouring territories, but would of necessity greatly enhance the importance and value of the line from Kurrachee to Hyderabad. Scinde and the Punjaub (including the States under control), cover an area of 130,000 square miles, with a population of nearly twenty-five millions. The flower of the European and native army occupies these provinces, and numbers 70,000 men, more than 15,000 of whom are Europeans.

This Board having received official information that the views long entertained by them, as to the best mode of introducing improved means of transit along the line of the Indus, had been approved by the local authorities, they addressed to the Court of Directors of the Honourable East India Company the following letter :—

"SCINDE RAILWAY COMPANY,
GRESHAM HOUSE, OLD BROAD STREET,

"SIR, 14*th March*, 1856.

"The Directors having received a communication under date the 26th January, from their agent in India, submitting for the sanction of this Board, in compliance with a suggestion of the Government of Bombay, a proposal that surveys should be made by the Scinde Railway Company (enclosure 2), with a view to the extension of the line of railway towards Lahore, and enclosing correspondence with the Government authorities relating thereto as noted in the margin; copies and extracts of the same, being annexed for the information of the Honourable Court.

1. From the Commissioner in Scinde to the Governor and President in Council. Bombay, dated 12th Dec., 1855.

2. Extract of letter from Secretary of the Governor of Bombay to Commissioner in Scinde, dated 2d July, 1855, par. 1 and 3.

3. Letter from the Agent to the Chairman, dated 26th Jan., 1856.

4. Extract from letter of Resident Engineer to Agent, dated 16th Jan., 1856.

5. Letter from Resident Engineer to the Commissioner in Scinde, dated 14th Dec., 1855.

"2. I am requested on behalf of this Company, to state their readiness to undertake the necessary surveys of the line from Mooltan to Lahore and Umritser under the direction of the Government consulting engineer; should it be the pleasure of the Court to have them proceeded with, and that all the expenses occasioned by the surveys should be placed to a separate account, and be appropriated hereafter according to the arrangement that may be ultimately entered into.

"3. Should the Honourable Court concur in the views expressed by the Commissioner in Scinde (enclosure 1), the Chief Commissioner of the Punjaub (enclosure 7), and the Government of Bombay (enclosure 2), as to the great importance of the extension of improved means of transit along the Valley of the Indus, this Board is of opinion, that

instead of making a through communication by means of a railway between Kurrachee and Lahore, as appears to be recommended by the agent and resident engineer of the Company, in their letters (enclosures 3 and 4), that the present is a favourable opportunity for introducing the economical and easily established system of communication, combining steam transit by land with steam transit by water, so long advocated by their Chairman.

6. Extract from letter from the Commissioner in Scinde to the Chief Commissioner in the Punjaub, dated 21st Sept. 1855.

7. Extract from letter of Secretary of Chief Commissioner in the Punjaub to Commissioner in Scinde, of 23rd Oct., 1855, par. 2 and 4, with Extracts of Letters from Chief Commissioner in the Punjaub to Government of India.

"4. For instance, the lower portion of the line from Kurrachee to Hyderabad, by the railway already sanctioned, which will avoid the dangers and delays of the Delta, from Hyderabad to Mooltan by steamers of improved construction, resuming the railway from Mooltan to Lahore and Umritser.

"A reference to the letters (enclosures 6 and 7) from the Commissioner in Scinde, and the Chief Commissioner of the Punjaub, will show that these views are approved of by the local authorities.

"I have the honor to be, &c., &c.,

"(Signed) W. P. Andrew,

Chairman.

"Sir James C. Melvill, K.C.B.,

&c., &c. &c."

The Directors have the satisfaction to report, that the East India Company have authorized the survey of the country between Mooltan, Lahore and Umritser, by this Company, and in conformity with which, a superintending engineer of ability and experience, with a carefully selected staff of six engineers, left England for India on the 4th of September.

The Directors have much gratification in stating their cordial and entire approval of the conduct of Mr. J. Neville Warren, the agent and representative of the Company in India.

W. P. ANDREW,

Chairman.

Proceedings of the First Half Yearly General Meeting of the Shareholders, held Nov. 4, 1856.

The first half-yearly general meeting of the Proprietors of this Company, was held on Tuesday, Nov. 4, at their offices, Gresham House, Old Broad Street, Mr. W. P. Andrew, the Chairman of the Company, presiding.

The Secretary (Mr. Burnell) having read the advertisement convening the meeting, and the seal of the Company having been affixed to the register of shareholders, the report was taken as read :—

The Chairman observed that the Directors had informed the Shareholders in their report that they had sent out the material necessary for the first thirty miles of the railway, and since then they had contracted for the material for another thirty miles, making sixty miles for which they had provided all that was requisite for the construction of the permanent way. When he last had the honour of addressing them, he stated that he and his colleagues from the first took up this project as a link in the great line of communication which they proposed to carry on to and through the Punjaub. Subsequently they had received the sanction of the authorities to send out a superintending engineer with a competent staff of assistants for making the necessary surveys for carrying out that line. The authorities themselves were taking measures for adding considerably to the steam flotilla now on the Indus, and by recent accounts from the Punjaub and from Scinde it appeared that the traffic of those two provinces was increasing in a most extraordinary degree, so much so,

indeed, that the existing steam flotilla was found altogether inadequate for the conveyance of even the Government stores. Under these circumstances, the Company were proceeding, under the authority they had received, to make the necessary surveys, but the terms upon which the line would be constructed remained for future adjustment.

At the last meeting of the Shareholders, some gentleman expressed an opinion that, if eventually they undertook the construction of any further portion of the through line, the accounts for the Scinde Railway proper should be kept distinct [hear, hear]. Having, as they had, a considerable and rapidly growing port, at one end of their line, and a large and populous town, the emporium of the cross-trade of the country, at the other, it was natural that those who had embarked their capital on the faith of those advantages, should desire to retain them, and not allow the money subscribed for a specific purpose, to be mixed up with other railway projects, which, in their view, might not be equally productive. He stated, at the time, that he concurred in that idea, and he had now to repeat that, if the Punjaub line were entrusted to this Company, the capital account would be kept separate and distinct from that of the Scinde Railway.

In respect of the line from Kurrachee to Hydrabad, they would have the guarantee of 5 per cent., on whatever capital might be required to complete it, and, by that line, they would secure the spout of the funnel through which all the traffic of the Punjaub, and the Upper Provinces would be brought down to Kurrachee (the natural port) for shipment.

He had at the last meeting, spoken of the great influence which a line of railway along the valley of the Euphrates must necessarily have, upon any line running through the valley of the Indus. Since he referred to that subject, he (the chairman) had been in communication with gentlemen connected with the English Government, and with others who

belonged to the Turkish Government, and he was happy to say that nothing could be more gratifying than the manner in which the project was entertained by both. [Hear, hear]. To Lord Clarendon he was under a deep debt of obligation for his courteous, prompt, and powerful support; and the Turkish Government had also evinced every desire to promote the object in view. Only yesterday he had received a letter from his gallant friend General Chesney, from Aleppo, who with Sir J. Macneill and his staff was there as a deputation to survey the line from Seleucia, by Aleppo, to the Euphrates, stating that everywhere the proposed railway was favourably regarded, and, what was still more important, that the Arab tribes had sent to felicitate the deputation on their arrival, and to express their anxious desire to see this improvement carried out by Englishmen, because by them they knew they would be treated with justice and liberality.

They were aware also that an important movement was making for the establishment of a system of telegraphic communication between England and India, along the Euphrates valley to the Persian Gulf, and which would, at Kurrachee, unite with the Indian telegraphic system. By the last mail they were informed that the Indian Government had issued orders to lay down a line from Lahore to Kurrachee, which would place Kurrachee in telegraphic communication with all the presidencies—Calcutta, Madras, Bombay, and throughout the North West frontier.

All, therefore, he had said at the previous meeting about the importance of Kurrachee as the European Port of India, he had reason to reiterate. The commerce of that port was increasing enormously, and its capacity to receive ships of large burden was now beyond doubt. At present, however, the arrangements of the port were insufficient for the increasing demands of its commerce, but the government, which was sending out very large quantities of stores, had also sent out

instructions for obtaining an efficient force of pilots and steam tugs, whereby all difficulty of taking vessels safely to and from the port would be obviated. In a recent note he had received from his distinguished friend, Mr. Frere, the Commissioner of Scinde, it was stated that Colonel Jacob, who was acting for him in that Government, had reported that the total exports for the year 1855-6 were 50 per cent. in excess of those of the previous year, the previous rate of increase having been 20 per cent. per annum. The most remarkable increase had been in oil-seeds, and wool, which had been respectively 900 per cent. and 60 per cent. during the last year.

Colonel Jacob estimated that the quantity and value of the articles suitable for British consumption exported from that province *viâ* Bombay to the English markets was 18,000 tons, and £38,000 in value,.to which was to be added about 15,000 tons flax that would come down from the northward, making 33,000 tons and £500,000 in value of exports suitable for British consumption from this province. He mentioned this, and more especially the article wool, which was of excellent quality, and the staple produce of the valley of the Indus, as showing how important this portion of India was likely to be to the manufacturing interests of this country when the proposed railway system was completed. The commerce of the Punjaub was very great. That of Umritser alone was estimated at from £2,000,000 to £3,000,000 a year, and that of Lahore and Mooltan was also large; but at present, the trade which flowed from these great emporia of the commerce of Europe, India, and Central Asia, went down the Ganges instead of the Indus; but the moment the railway communication was completed, they would go by the valley of the latter river, which was their natural route. He might also mention, that the soil of the Punjaub was particularly favourable for the formation of railways, though it was entirely unfitted

for common roads, which made the railway a commercial necessity.

Again, the famous *Khalsa* who fought against us with such resolute valour, were now directing their attention with all that energy which belonged to their race, to the cultivation of the soil, as peaceful husbandmen; but the absence of roads made it impossible to do so with profit, and not only was a large proportion of the produce lost, but by being left to rot on the ground, the excess of production beyond the wants of the people actually became injurious. A railway to the port of Kurrachee would bring cotton and other produce down for shipment, and, both socially and politically, the whole country would be benefitted. He might here also take the opportunity of stating, that the undertaking would in no wise interfere with the system of irrigation which was being so earnestly promoted, but, on the contrary, the railway system was essential to those efforts, inasmuch, as without the railway there would be an enormous excess of production without the means of transport. In addition to all these considerations, he might mention that a new trade had recently sprung up between Kurrachee and the Mauritius, and also between Kurrachee and the Persian Gulf, which would contribute to the traffic of the Scinde and Punjaub lines. He hoped they would excuse him for introducing so many topics, but they all had an intimate bearing upon the great object to which, for so many years, his attention had been directed, namely, the communication of Central Asia with Europe, by railway and river transit, making the railway supplemental to the natural highway of the country [hear, hear]. At present, the existing trade from the Euphrates to the Mediterranean was large, but what would be the result if they had a railway running from the head of the Persian Gulf to the Mediterranean, and another along the valley of the Indus from Kurrachee, to

the confines of Central Asia, it was impossible to estimate. The commerce which now existed along the route of the Indus, would be sufficient to pay an ample return upon the proposed capital, but when the whole system was carried out, and the commerce of those ancient countries watered by the Indus, the Tigris and the Euphrates, was resuscitated, there was reason to believe that the advantages to the world would be beyond the most sanguine anticipations.

It was with feelings of the deepest regret he referred to the death of his esteemed colleague, Mr. Francis Horsley Robinson, on the 14th of last month, at Constantinople. Mr. Robinson went out as Commissioner to the Turkish Government, representing the European and Indian Junction Telegraph Company, and was engaged in negotiations with the Turkish Government at the time of his death. He had spent many years of his life in India, where he acquired not only fortune, but a high and unblemished reputation, and he died while promoting the welfare of that country, by endeavouring to place it in telegraphic connection with Europe. By his death, he (the chairman) lost a warm friend and faithful counsellor. To fill up the vacancy at the Board, the Directors had appointed Mr. Harry Borradaile, and as Mr. Borradaile had previously acted as Auditor of the Company, there necessarily arose a vacancy in the latter office, which it was for the Proprietors to fill up. He regretted that Mr. Frere, who took so great an interest in the prosperity of Scinde, was not present at the meeting, being, at that moment, in a remote part of Scotland, but Mr. Ellis and Mr. Bellasis were there, both personally acquainted with the country in which their operations would be carried on, who would be happy, he was sure, to afford information upon any subject connected with the country of the Lower Indus, and he himself would be glad to answer any questions in his power, but although he had been in

India, and on the banks of the Sutlej, he was not fortunate enough to be personally acquainted with the "happy valley" of Scinde [hear, hear]. The honourable gentleman concluded by moving the adoption of the report.

SIR HERBERT MADDOCK, M.P., (a director) seconded the resolution; and alluded to the rising importance of Kurrachee, which was formerly a mere village, but which he believed was destined to become one of the greatest ports of India! The traffic of Central Asia and the Punjaub was immense. The military force in the Punjaub alone numbered more than 70,000. He spoke from personal knowledge of India, of the importance of the intended lines of railway, combined with steam communication across the Persian Gulf, by means of which, the commerce of Central Asia would be diverted from Persia, Turkistan and Russia, and find its way down the Valley of the Indus to Kurrachee, which was destined to become the greatest commercial capital in India, whilst the manufactures of England would seek that channel in exchange for the produce of India. In the mere matter of insurance of cargoes alone, he understood that a saving of at least 25 per cent. would be effected by the introduction of this line of 110 miles in length from Kurrachee to Hydrabad [hear, hear]. This was an indication only of the general advantages to be secured.

A PROPRIETOR wished to know whether the Chairman could give them any idea when they would commence operations.

The CHAIRMAN said, that the plans and sections of the line had been prepared and lodged with the local government. He believed they were now under the consideration of the supreme government, and the moment they decided upon the exact route which should be followed, ground would be broken.

The PROPRIETOR asked, whether the line would be a long time in construction?

The CHAIRMAN said, he did not consider that the line would take a long time in construction; the ground was particularly favourable; there were no heavy cuttings or tunnels, and only two bridges of any magnitude. Orders for the rolling stock were about to be given; so that they did not anticipate any unnecessary delay. He might mention, that they hoped speedily to open a short portion of line connecting the harbour with the town and the cantonment, which would be of great importance for local traffic and conveyance of materials.

In answer to a question as to the surveys in Upper India,

The CHAIRMAN said, he believed the report which would be made was rather a matter of form than otherwise—namely, whether the route proposed was favourable for a railway. Colonel Napier, the Chief Engineer of the Punjaub, and Sir John Lawrence, who was at the head of the government of the province, had spoken favourably of it, and he did not anticipate, therefore, any difficulty on the part of the supreme government. The country had been surveyed with a view to the revenue settlement, and nearly mapped; so that no staff of engineers could meet with greater facilities for their work. He begged to repeat, also, his previous remarks as to irrigation. The promotion of the railways in no manner would interfere with the extensive system of irrigation proposed in the Punjaub. He might also further state, that the government had not the slightest idea of suspending the construction of railways, as had been done in the case of other public works.

There was another point of great interest which he would notice before he sat down, namely, the production of native iron, and the practicability of its manufacture and applicability to engineering works. The Proprietors would, no doubt, have observed in the Morning Papers the reprint of a document issued by the Court of Directors of

the East India Company on the subject. The manufacture of native iron for rails was second only in importance to the construction of railways themselves in India. From the researches of his indefatigable friend Colonel Drummond, who, for more than twenty years, devoted himself to the subject, there was now no doubt that iron, in every way suited for rails, might be raised in any quantity at the foot of the Himalayas, where iron ore was lying in vast masses, and there was also abundance of fuel for smelting, lime for flux, and clay-stone for furnaces, with the advantage of thirty or forty miles of a good road to river transit. Thus, the great difficulty and expense of procuring materials from Europe for Indian railways, he hoped, would be avoided; and he looked forward to the day, and that not distant, when the railways of the Punjaub would be made of native iron, and wrought by native manufacturers. *Railways could never be constructed in India on the extensive scale demanded by the wants of that country, until Indian rails were made of Indian iron* [hear, hear].

Sir H. Maddock, upon this last point, observed that thirty years ago, when he was governor of an Indian province, iron was dug, smelted, and converted into bars in that province, and a suspension bridge in the Saugur-Nerbudda district still existed which was constructed out of those bars, across a river 200 feet broad. Financial considerations, under the Governor-generalship of Lord William Bentinck, interposed to prevent the prosecution of the iron-works, and the construction of similar bridges over other rivers; but the fact he had stated settled the question of the existence of iron in India suitable for rails and other engineering purposes [hear, hear].

A Proprietor remarked, that satisfactory as was the assurance of Sir Herbert Maddock as to the applicability of

native iron to engineering works, it was discouraging to reflect, that all this was proved thirty years ago, and no progress had been made since in that direction. He hoped they were not going to wait for thirty years more! (a laugh.)

The report was then put and carried: and Major John Arthur Moore having been proposed by Mr. Ellis, late Assistant Commissioner in Scinde, and seconded by Mr. Bellasis, late Collector of Hydrabad, was unanimously elected an Auditor of the Company in place of Mr. Borradaile; a vote of thanks was then unanimously passed to the Chairman and Board of Directors, for their zeal and ability in promoting the interests of the Company.

Mr. Andrew, in acknowledging the compliment, thanked the Proprietors for this mark of their continued confidence, and expressed the determination of the Board to spare no exertion necessary for the successful prosecution and establishment of a comprehensive system of steam transit along the valley of the Indus, connecting the emporia of the Punjaub and N. W. Provinces with the sea at Kurrachee, the European port of India, and the natural outlet of the important and extensive countries drained by the Indus and its tributaries; this was a great undertaking, which they regarded as not only essential in a commercial and social, but also in a political, point of view (applause).

The Meeting then separated.

LONDON:
W. LEWIS AND SON, PRINTERS, 21, FINCH LANE, CORNHILL.

REMARKS OF THE PRESS

ON

WORKS ON INDIAN RAILWAYS,

BY

W. P. ANDREW, Esq.

Indian Railways, and their probable Results. By an Old Indian Postmaster. (Second Edition, 1846.) Third Edition. T. C. Newby: Pelham Richardson, Cornhill. 1848.

From "ALLEN'S INDIAN MAIL," *August 13th*, 1846.

"In regard to the great line to connect the seat of government with the extreme north-west, the author's opinions are peculiar.

"He would construct the northern part of the line before the southern, arguing that the Ganges, so far as it is navigable, supplies the means of communication; and that it is where this accommodation ceases, that a railroad is more especially wanted."

From "THE TIMES," *City Article, 22nd October*, 1846.

"It (Indian Railways) contains a great quantity of information."

From "THE TIMES," *City Article, 19th November*, 1851.

"The line (in Bengal) seems to have been adopted, which was originally recommended by Mr. W. P. Andrew."

From the "MORNING HERALD," *Leading Article, November 14th* 1846.

"We have little doubt that the preference given to the Mirzapore Line by the Railway Commissioners, will be confirmed by the Supreme Government and the Court of Directors; for we can scarcely imagine that those bodies will participate in the 'Old Postmaster's' weakness in favour of the intermediate river trip from Rajmahal to Allahabad, on the way from the Presidency to the north-west frontier."

From the "MORNING HERALD," *September 14th*, 1852, *City Article.*

"Mr. Andrew is well known as the author of a valuable work published some years ago by Mr. Pelham Richardson, under the *nom de guerre* of an 'Old Indian Postmaster,' by which public and official notice was mainly, if not first, directed to the great object of railway communications in India, and its immense import, not alone to the accelerated development of the prodigious resources of that vast empire, but to its safety and conservation."

From "The Economist," *26th February*, 1848.

"Our author is for trusting the formation of the roads with some judicious guidance, to private speculation. He makes the following statement, illustrating the folly of government undertaking such examples, by the case of Philadelphia:—

PRIVATE OR PUBLIC MANAGEMENT.

"'Three propositions suggest themselves as to the policy to be adopted, and agencies to be employed, in the formation of railways in a new country.

"'1st. That they be, with certain restrictions and provisions, left to unfettered and unaided private enterprise, as has been hitherto the case in this country.

"'2nd. That the government itself should project and define a great and comprehensive system, as well as execute and work the lines most apparently conducive to the common weal, as in Belgium.

"'3rd. That the government should grant concessions or leases of various sections, or particular projects to private companies, on such terms as might be mutually advantageous; the latter to have the execution of the works, and the management of the traffic of the lines, under the direct supervision and control of officers appointed by the government, as has been practised in France, and more recently in Belgium.

"'Judging from the confusion which has arisen in this country, by giving the reins to speculative enterprise, the crude and angular manner in which railways were commenced in France, and the harmonious and beneficent manner in which the Belgium system has resulted, there appears to be little doubt but that it is the most effective and rapid mode of introducing railways into a country.

"'We would, however, from financial considerations, deviate so far from this example, as to give, after defining the line, the concession to a private company; for Belgium had to borrow money at five per cent. to make railroads, which did not, till very lately, yield more than two and a-half per cent. And Pennsylvania, which in 1824 was bitten with the improvement mania, 'believed, and truly, that a system of inland communication by means of canals and railroads, would tend to increase her prosperity. She believed that the annual income of these public works would not only pay the interest on the first cost, but would leave a liberal overplus for public purposes. What was the result?

"'The state, after having spent millions, wisely gave away the works in an unfinished condition to companies of private individuals, on condition that they would finish them. In addition to this the favouritism and peculation inseparable from Government patronage and expenditure served to swell the costs of these

works to a most disastrous extent. The consequence was, that in 1841 or 1842 the state was forty millions in debt.

" 'State lines can neither be worked with the same economy, nor can they have imparted to them that impulse which the spirit of private enterprise alone can give.'

" To follow our author through all his calculations, would be to transcribe a large part of his book; and we shall only say, that he is of opinion, that by eschewing the ornamental, and improving on the American system, we might effect an extensive railway development in India, at a much less cost, and better adapted to the rough work it would be subjected to, than of transporting a 'Birmingham,' or a 'Great Western,' with all its grandeur and complicated arrangement, into Hindostan. In that there is much wisdom.

" In this book altogether, there is much information, and whoever is interested in the subject of railways in India should consult it."

From "THE ECONOMIST," *December 13th*, 1851.

" We see with some satisfaction, that the views propounded as to forming railways in India by Mr. W. P. Andrew, under the cognomen of an 'Old Indian Postmaster,' and which were long ago recommended in our journal, find favour in India, and are likely to be adopted."

From the "OBSERVER," *February 13th*, 1848.

" The third edition of a work on Railways is a fact in literature, almost unprecedented, and one which speaks trumpet-tongued for the value of the publication.

" The Old Indian Postmaster has added an immense mass of information to this edition of his book; which, now that it may be said to be as complete as human hands can make it, is of inestimable account, in reference to the great subject of Indian railways. The author devotes some space at the commencement of the work to defend his opinions; but that they needed no defence, is proved by the exhaustion of two editions of his work.

" Their truth is the best defence they can have; and that is so obvious, that 'those who run may read.' In fact, there has not been such a valuable contribution to the civilization of India, as this work on Indian Railways, since the era of its absorption into the dominions of her Majesty. Every one interested in Indian railways will, of course, possess it; while every general reader should, as a matter of information, make himself master of its contents."

From the "OBSERVER," *November 23rd*. 1851. *Indian Railways*.

" It is not a little remarkable, on reviewing the past and present position of Indian railways, to perceive that the views of a private individual

have prevailed against, and finally overthrown, the plans of the Indian Railway Commission (composed of a civil engineer, sent at a great expense from this country, aided by two talented officers of the Hon. East India Company's engineers,) approved of by the governor-general, the India House, and Cannon-row authorities, and applauded by the press. When we had occasion to review Mr. W. P. Andrew's various publications on Indian railways, as they issued from the press, we were amongst the first to call public attention to the originality and soundness of the views communicated, and it now appears that the result will prove a signal vindication of the correctness of those impressions.

"Indeed, the Railway Companies in Bengal and Bombay that have obtained concessions are carrying out the views of 'the Old Indian Postmaster' to the letter, so far as the limited capital at their disposal will allow them; and it may be predicted that whenever a concession is given for a railway in Madras, it will be for the line that writer so strongly advocated, viz., to Arcot, the only short line in India which, in his opinion, would prove commercially remunerative."

"Of the Railway Commission, Mr. Andrew in 1846 wrote thus:—'It might have been hoped that the Railway Commissioners would have cleared the way to a satisfactory decision on this subject (the introduction of the railway system into India), with an authority derivable from the soundness of the views enunciated, the variety of new and interesting data, the prestige of office, and acknowledged ability. But their report, beyond giving an official sanction to railroads in general, sheds no new light on the question at issue. Instructed to suggest some feasible line of moderate compass, the principal portion of their report is devoted to recommending the adoption of a railroad of four hundred and fifty miles in length, through the most difficult, most unproductive, and most desolate portion of a country, elsewhere easy, fertile, and densely peopled.

"'That plan of commencing improved transit, which would only supersede the river navigation where it was most defective, and co-operate with it where it was always available, *i.e.*, a railroad from Calcutta to deep water in the Ganges at Rajmahal is clearly the one that should be adopted; from this point river steamers to Allahabad, at the confluence of the Jumna and Ganges, where deep water ceases, and a railroad from Allahabad to Delhi and the Sutlej.'

"The arrival of the last mail from India brought the following information on the subject:—'The Howrah terminus indicated by Mr. Andrew, to save bridging the Hooghly, has been adopted, and a section of the line as far as Pandooah is either in progress or under contract. The Railway Company have advertised

for contracts for a further section, viz., from Pandooah to Raneegunge.

"There cannot now be a reasonable doubt that the line will be carried ultimately to Rajmahal.

"Had the plans of the Railway Commissioners been adhered to, the East India Railway Company would now be bridging the Hooghly, with its banks ever trembling or in locomotion, or building a bridge over the Soane as great in all its dimensions as the Blackwall Railway, after searching diligently for its foundatians 'below an unknown depth of sand.'

"The Government and people of India are therefore indebted to the 'Old Indian Postmaster,' who has thus saved them from prosecuting a design that could only have led to disastrous and humiliating results, which would have been felt both in India and this country."

From the "INDIAN NEWS," *February 22nd*, 1848.

"The best testimony of the soundness of the 'Old Postmaster's' views is, that, in the settlement of Indian railways, as far as it has recently taken place, not a few of his opinions have been followed by those in authority. We know of no work on the subject which can be compared with it, whether as regards the local knowledge possessed by the writer — the judicious application of that knowledge, or as an exposition of the advantages which must result from improved modes of transit in the East, both to native industry and the requirements of British commerce."

From the "INDIAN NEWS," *22nd May*, 1850.

"The sum guaranteed, viz., £1,000,000 is not sufficient for the construction of a line that will yield any return. The line from Calcutta to Mirzapore, the proposed terminus of the East Indian line is 450 miles, the estimated cost of which is £16,000 per mile, *i.e.*, 7,000,000.

"Besides, it is a fact which cannot be refuted, that a line commencing at Calcutta must debouche on the Ganges, before any benefit can accrue, either to the Government, the commerce of India, or to the people.

"These facts, as clear as they are indisputable, were promulgated four years ago, in a work on Indian Railways, by Mr. Andrew, and reiterated in a letter addressed by him to Sir J. Law Lushington, in 1848. Subsequent experience proves their correctness."

From the "MORNING CHRONICLE," *May 21st*, 1850.

"The opinion in Calcutta appears to be, that it is useless to attempt any experiment unless a capital of £2,000,000 is subscribed, as no railway in Lower India can possibly be made to pay that does not debouche on the Ganges. The rail must be carried, in the first place, to Rajmahal, which is 200 miles from Calcutta. This was clearly explained by Mr. W. P. Andrew five years ago in his work on Indian railways; and the opinions of the old post-master appear now to be fully confirmed by the experience of those on the spot."

From the "MORNING CHRONICLE," *November 20th*, 1851.

"INDIAN RAILWAYS.—We have more than once predicted that the views propounded, several years ago, by Mr. W. P. Andrew, would be those that the Indian authorities would finally adopt in preference to the plan recommended by the Indian Railway Commission. Mr. Andrew's project was to connect Calcutta (or, rather, Howrah) on the opposite bank of the Hooghly, with the main Ganges at Rajmahal, the lowest practical point.

"This railway would be about 200 miles in length, and would save, for eight months in the year, 530 miles of dangerous and difficult navigation through the Soonderbunds.

"The plan of the Railway Commission was to connect Calcutta with Mirzapore, on the main Ganges. This would be 450 miles of railway through a difficult country, and debouching on the Ganges at a point where the commerce was neither so great nor so impeded as lower down. By recent accounts from India, we observe that the Howrah terminus, indicated by Mr. Andrew to save bridging the Hooghly, had been adopted, and that section of the line as far as Pandooah was either in progress, or under contract; and by the last mail we observe that the railway company have advertized for contracts for a further section, viz., from Pandooah to Raneegunge. There cannot now be a reasonable doubt but that the line will be carried ultimately to Rajmahal."

From the "BRITANNIA," *December 13th*, 1851.

"It is announced, we see, by the 'Friend of India, received by the last mail, 'That the Court of Directors had decided for the adoption of the line proposed by Major Kennedy from the collieries to Rajmahal, and thence up the valley of the Ganges, which is exactly the scheme originally propounded and advocated by the 'Old Indian Postmaster', Mr. W. P. Andrew, in 1846, some two or three years before Major Kennedy went to India, and to whom exclusively the merit is due of having pointed out the erroneous views of the East Indian Railway Company, and adopted by the Indian Government Railway Commission. Had the authorities acted upon Mr. Andrew's views, a large and useless expenditure of time and money would have been saved; and it is admitted on all hands, that this gentleman 'has saved railway enterprise in India from a great and lamentable failure, which would have reduced India to a state of more hopeless apathy and irretrievable desolation than ever; famine and pestilence would have resumed their periodic reign, the happiness and prosperity of the people would have been retarded for ages, and England's independence of America for the supply of raw material for the greatest of her staple manufactures, been more remote than ever.

Is India to have Railways? Or, Fallacies of an East Indian Merchant Exposed in a Letter to Lieut.-General Sir J. L. LUSHINGTON, G.C.B., *Chairman of the Hon. East India Company, by* An East India Officer. W. H. Allen & Co., Leadenhall Street. 1848.

From the "OBSERVER," *November 17th*, 1848.

"This is a bold and able exposure of the system of Indian Railways, as proposed to the public in this country, and an unanswerable vindication of the good faith of the India House authorities.

"The writer is a man evidently well versed on his subject, which he treats in a manner that exhausts the whole question, and leaves nothing to be desired.

"The India Company owe him much as a volunteer champion in a matter wherein their integrity was more than suspected: he has certainly carried them through triumphantly. This pamphlet will be perused with deep interest.

From "ALLEN'S INDIAN MAIL," *January 5th*, 1849.

"This pamphlet, which is a most unmerciful exposure of the proceedings of the Directors of the East India Railway Company, inflicts a lacerating castigation upon their advocate, 'An East India Merchant,' whose 'Letter to Lord John Russell,' noticed in the 'Mail' of Nov. 2nd, the 'East India Officer' considers as 'the semi-official manifesto' of the East Indian Railway Company, on behalf of the Directors and employées.

"It is lamentable to find that an undertaking, which, under proper management, might have been made one of the pioneers of great local improvement in India, has been so misconducted; and the public owe thanks to the 'East India Officer' who has exposed the real causes of so miserable a failure."

Railways in Bengal: being the Substance of a Report addressed to Sir A. GALLOWAY, K.C.B., *by* W. P. ANDREW, Esq.

From the "COLONIAL AND ASIATIC REVIEW," *July*, 1852.

"The following paper (Railways in Bengal) giving, in a condensed form, the published opinions of the writer, was at the request of the late Sir A. Galloway, K.C.B., submitted to him when Chairman of the East India Company in 1849, and forwarded by him to the Board of Control, who considered it sufficiently important to retain possession of the original. The East India Railway Company being about to apply for additional capital, to enable it to carry out the views contained in this report, in place of those propounded by its own promoters and founders, and recommended by the Indian Railway Commissioners, the document comes before the public at this moment invested with additional interest and authority."